SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Phone N Mail Box and Bldg/Room Location	umber 30 <u>8 - 4841e</u>	Examiner #: 11029 Serial Number: 199 Ilts Format Preferred (circle	Date: 2/2002 438.030 PAPER DISK E-MAIL
If more than one search is submi	tted, please prioritiz	e searches in order of n	eed.
Please provide a detailed statement of the s Include the elected species structures, ke utility of the invention. Define any terms t known. Please attach a copy of the cover sl	ywords, synonyms, acron hat may have a special me	yms, and registry numbers, and aning. Give examples or releva	combine with the concept or
Title of Invention: Methods for	Reducing Distr	1 Embolization	
Inventors (please provide full names):	Mir A. Imvan,	Keten P. Kuni, G	Japan-Reza
Zadus-Azizi	<u> </u>		
Earliest Priority Filing Date: 13	04/97		v i
For Sequence Searches Only Please includ appropriate serial number.	e all pertinent information (parent, child, divisional, or issued	patent numbers) along with the
A method for treatment	t of an occlusion	on	
-delivering an aspiration	n catheter with the occlusion	. a guidewive & until	both distal ends proximal to distal
- simultaneously crossed direction with the aspirating - moving the dietal of the occlusion in	distal end of end of the asy	the gudenive and o pivation catheter but	eatheter while the across the site
- exchanging the guid distal and - positioning the occlusion	7	3	
More agnerally	- **		
-aspirating an occli distalog across the	isive gite in a ne occlusive si	vossel while prose	ring a guidenive
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STAFF USE ONLY	Type of Search	Vendors and cost	**************************************
Searcher: JEANNE HORRIGAN	NA Sequence (#)	STN	
Searcher Phone #: 305 - 5934	AA Sequence (#)	Dialog	
Searcher Location: <u>CP2 - 2008</u>	Structure (#)	Questel/Orbit	
Date Searcher Picked Up: 2 - 22	Bibliographic	Dr.Link	
Date Completed:	Litigation	Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext	Sequence Systems	
Clerical Prep Time:	Patent Family	WWW/Internet	
Online Time: 47	Other	Other (specify)	
TO 1 400 (1 0000)			

February 25, 2002

TO:

Catherine Serke, Art Unit 3763

CP2, Room 3-E-16

FROM:

Jeanne Horrigan, EIC-3700 M

SUBJECT:

Search Results for Serial #09/438030

Attached are the search results for the "Methods for Reducing Distal Embolilzation," including results of an inventor search in foreign patent databases, and prior art searches in foreign patent, medical, and general sci-tech non-patent databases.

The results are in two sections: one contains abstracts and bibliographic citations, the other has only titles, descriptors, or key words in context (I did not think that the material in this section sounded as relevant as the material in the abstracts section.) In the abstracts & bibliographic citations section, a row of asterisks marks the end of a search, including the search strategy, in a particular set of databases and the beginning of a new search in a different set of databases.

I tagged the items that seemed to me to be most relevant, but I suggest that you review all of the results.

Also attached is a "Search Results Feedback Form." Your feedback will help enhance our search services.

I hope these results are useful. Please let me know if you would like me to expand or modify the search or if you have any questions.

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February 25, 2002
5/7/1
          (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Derwent Info Ltd. All rts. reserv.
012078650
            **Image available**
W7I Acc No: 1998-495561/199842
  Aspiration catheter for removing occlusions in saphenous vein grafts -
  has aspiration port connected to proximal end of main lumen and distal
  end tip made of more flexible material than rest of catheter body
Patent Assignee: PERCUSURGE INC (PERC-N)
Inventor: BAGAOISAN C J; BLEAM J C; HA H V; KIM I J; LAM S; MUNI K P;
  PATEL M R; ZADNO-AZIZI G; IMRAN M
Number of Countries: 082 Number of Patents: 005
Patent Family:
Patent No
              Kind
                    Date
                             Applicat No
                                                   Date
                                            Kind
                                                            Week
WO 9839047
              A1 19980911
                             WO 98US4494
                                             Α
                                                 19980306
                                                           199842
US 5833644
                   19981110
                             US 96650464
              Α
                                             Α
                                                 19960520
                                                           199901
                             US 97812875
                                             Α
                                                 19970306
                            AU 9863477
AU 9863477
                   19980922
              Α
                                             Α
                                                 19980306
                                                           199908
EP 1011775
                            EP 98907741
              A1
                   20000628
                                             Α
                                                 19980306
                                                           200035
                             WO 98US4494
                                             Α
                                                 19980306
US 6152909
              Α
                   20001128
                             US 96650464
                                             Α
                                                 19960520
                                                           200063
                             US 97812875
                                             Α
                                                19970306
                             US 97813807
                                             Α
                                                 19970306
                             US 97813808
                                             Α
                                                 19970306
                             US 9826013
                                             Α
                                                 19980219
Priority Applications (No Type Date): US 9826013 A 19980219; US 97812875 A
  19970306; US 97813807 A 19970306; US 97813808 A 19970306; US 96650464 A
  19960520
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
             A1 E 35 A61M-025/00
WO 9839047
   Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
   CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR
   LS LT LU LV MD MG MK MN' MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
   TR TT UA UG UZ VN YU ZW
   Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE
   IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
US 5833644
             Α
                      A61M-031/00
                                     CIP of application US 96650464
AU 9863477
             Α
                                     Based on patent WO 9839047
             A1 E
EP 1011775
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P 1011775 A1 E A61M-025/00 Based on patent WO 9839047 Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU

MC NL PT SE
US 6152909 A A61M-025/00 CIP of application US 96650464

CIP of application US 97812875 CIP of application US 97813807 CIP of application US 97813808

CIP of patent US 5833644

Abstract (Basic): WO 9839047 A

An aspiration catheter has an aspiration port (18) connected to a main through lumen at the proximal end of an flexible tubular catheter body. A distal end tip (22) of the body is made of a more flexible material than the rest of the body. Also claimed are: (1) a catheter system including a valve communicating with the lumen of an aspiration catheter and a source of negative pressure connected to the valve and the lumen, and (2) a method of occluding a blood vessel using two catheters each with an occluding device at its distal end.

Serial 09/438030 Searcher: Jeanne Horrigan

February 25, 2002

USE - The device is used for removing occlusions from saphenous vein grafts, coronary and carotid arteries, arteries above the aortic arch and very small blood vessels.

ADVANTAGE – The catheters are designed for rapid evacuation and ease of use.

Dwg.2/18

Derwent Class: B07; P34

International Patent Class (Main): A61M-025/00; A61M-031/00

International Patent Class (Additional): A61M-025/10

8/7/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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.013400371 **Image available**

WPI Acc No: 2000-572309/200053

Occlusion treating apparatus for containing and removing stenosis or occlusion in blood vessel, has holes formed to occlusive device which discharge fluid directed to occlusion

Patent Assignee: PERCUSURGE INC (PERC-N); BAGAOISAN C J (BAGA-I); HA H V (HAHV-I); MUNI K P (MUNI-I); PATEL M R (PATE-I); ZADNO-AZIZI G (ZADN-I) Inventor: ZADNO-AZIZI G; BAGAOISAN C J; HA H V; MUNI K P; PATEL M R Number of Countries: 092 Number of Patents: 004 Patent Family:

Patent No Date Kind Applicat No Kind Date Week WO 200054673 A1 20000921 WO 2000US6906 20000316 200053 B Α 20001004 AU 200037512 AU 200037512 Α Α 20000316 200101 US 20010049517 A1 20011206 US 97813810 A 19970306 200203 US 97933816 Α 19970919 US 99270150 Α 19990316

EP 1164944 A1 20020102 EP 2000916404 A 20000316 200209 WO 2000US6906 A 20000316

Priority Applications (No Type Date): US 99270150 A 19990316; US 97813810 A 19970306; US 97933816 A 19970919

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 200054673 A1 E 57 A61B-017/22

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200037512 A A61B-017/22 Based on patent WO 200054673
US 20010049517 A1 A61M-031/00 CIP of application US 97813810
CIP of application US 97933816

EP 1164944 A1 E A61B-017/22 Based on patent WO 200054673
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LU LV MC MK NL PT RO SE SI

Abstract (Basic): WO 200054673 A1

NOVELTY - The occlusion treating apparatus has an inner wire (420) installed with an occlusive unit (422') at its distal end and pierced through an outer catheter (406). The occlusive device is inserted into a blood vessel up to the vicinity of the occlusion (410'), and is formed with holes (450) that discharge fluid e.g. saline solution directed towards the occlusion.

DETAILED DESCRIPTION - The fluid slowly removes portions of the

3

February 25, 2002

occlusion. The fluid is channeled into the occlusion device through the inner catheter. Preferably, the occlusive device can be e.g. inflatable balloons, filters or braids, or other mechanical devices.

USE - For containing and removing stenosis or occlusion including emboli e.g. thrombi, plaque in blood vessel e.g. carotid arteries and other arteries above aortic arch.

ADVANTAGE - Eliminates need for invasive treatment of occlusion, thus expediting treatment and reducing treatment cost. Reduces risk of patient. Eliminates need for using separate aspiration catheter.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of occlusion treating apparatus.

Outer catheter (406)

Occlusion (410')

Inner wire (420)

Occlusive unit (422')

Holes (450)

pp; 57 DwgNo 27/35

Derwent Class: P31; P34

International Patent Class (Main): A61B-017/22; A61M-031/00

International Patent Class (Additional): A61M-029/02

8/7/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012712406 **Image available**

WPI Acc No: 1999-518519/199943

Emboli containment when treating saphenous vein grafts, carotid or coronary arteries, etc.

Patent Assignee: PERCUSURGE INC (PERC-N)

Inventor: ZADNO-AZIZI G

Number of Countries: 083 Number of Patents: 002

Patent Family:

Patent No Kind Date Applicat No Kind Week Date A2 19990826 WO 99US3546 A WO 9942157 19990219 199943 B AU 9928697 19990906 AU 9928697 Α 19990219 200003

Priority Applications (No Type Date): US 9849712 A 19980327; US 9826106 A 19980219

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9942157 A2 E 88 A61M-025/01

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9928697 A61M-025/01 Based on patent WO 9942157 Α Abstract (Basic): WO 9942157 A2

NOVELTY - Emboli are contained within a working area of a blood vessel by using a guidewire (10) to deploy an occlusive device (20) downstream of the area.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) catheters being advanced along a guidewire to a working area. One catheter is withdrawn before a second catheter is advanced to the area;

- (b) a therapy catheter (50) being advanced over the guidewire and then the occlusive device is actuated. Next the area is treated using a therapy device (52) on the distal end of the catheter;
- (c) the catheter being replaced with an aspiration catheter for removing emboli from the area.

Preferred Features: The occlusion device is a mechanically deployed or self-expanding device or a balloon. The therapy catheter delivers drugs or ultrasonic vibrations.

USE - In exchanging catheters during emboli containment when treating saphenous vein grafts, carotid arteries, coronary arteries, etc. (claimed)

ADVANTAGE - Catheters can be exchanged quickly to minimize time blood vessel is occluded.

pp; 88 DwgNo 3A/52 Derwent Class: B07; P31; P34

International Patent Class (Main): A61M-025/01

International Patent Class (Additional): A61B-017/22; A61M-025/10

(Item 3 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2002 Derwent Info Ltd. All rts. reserv. 012078567 **Image available** WPI Acc No: 1998-495478/199842

Method of removing thrombus, embolism or other obstructions in carotid artery - using main and inner catheter that have occlusion device and therapy catheter for entering between to allow aspiration

Patent Assignee: PERCUSURGE INC (PERC-N)

Inventor: BAGAOISAN C J; MUNI K P ; PATEL M; ZADNO-AZIZI G

Number of Countries: 080 Number of Patents: 002

Patent Family:

Patent No Kind Date Applicat No Kind Date Week WO 9838930 A1 19980911 WO 98US4417 Α 19980306 199842 B А 19980922 AU 9864501 AU 9864501 Α 19980306 199908

Priority Applications (No Type Date): US 97933816 A 19970919; US 97813808 A 19970306

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 9838930 A1 E 40 A61B-017/22

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9864501 A61B-017/22 Α Based on patent WO 9838930 Abstract (Basic): WO 9838930 A

A kit includes a main catheter (406) and an inner catheter (420) that each have an occlusion device (408, 422), a therapy catheter and an aspiration catheter. An occlusion (410) in a carotid artery is treated by using main and inner catheters as above to install occlusion devices on either side of the occlusion to define a working area. A therapy catheter then enters the area to treat the occlusion and subsequently removed. In different aspects: (1) The occlusion device on the main catheter which is on the proximal side of the occlusion is deactivated so blood can flow into the area and the area aspirated through the main catheter or an aspiration catheter; (2) An

intermediate catheter aspirates the area to remove particles and debris; (3) An internal carotid artery is treated as in (2) and an occlusion device on a second inner catheter is installed before the therapy catheter enters; (4) As (2) where the therapy catheter is a balloon angioplasty catheter.

 ${\tt USE}$ - (Claimed) Removing thrombus, embolism or other obstructions from the carotid artery.

ADVANTAGE - The method is minimally invasive.

Dwg.17/21

Derwent Class: B07; P31; P34

International Patent Class (Main): A61B-017/22

International Patent Class (Additional): A61M-025/00

File 350:Derwent WPIX 1963-2001/UD, UM &UP=200212 File 344: CHINESE PATENTS ABS APR 1985-2001/Dec File 347: JAPIO Oct/1976-2001/Oct (Updated 020204) File 371:French Patents 1961-2002/BOPI 200207 Set Items Description S1 99 AU="IMRAN M":AU="IMRAN M A" S2 1 AU="MUNI K" AU="MUNI K P":AU="MUNI KETAN P" s3 30 S4 34 AU="ZADNO-AZIZI G":AU="ZADNOAZIZI G" S5 1 S1 AND S2:S3 AND S4 20 ASPIRATION () CATHETER? S6 **S**7 S1:S5 AND S6 4 S8 3 S7 NOT S5 ******

20/TI/2 (Item 2 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
VASCULAR FILTERS WITH RADIOPAQUE MARKINGS

20/TI/3 (Item 3 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
STRUT DESIGN FOR AN OCCLUSION DEVICE

20/TI/5 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
LOW PROFILE FOR ANGIOPLASTY AND OCCLUSION CATHETER

20/TI/6 (Item 6 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
CATHETER SHAFT

20/TI/8 (Item 8 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
HOLLOW MEDICAL WIRES AND METHODS OF CONSTRUCTING SAME

20/3,AB/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00825221

MEMBRANES FOR OCCLUSION DEVICE AND METHODS AND APPARATUS FOR REDUCING CLOGGING MEMBRANES POUR DISPOSITIF DE FILTRAGE ET PROCEDES ET APPAREIL REDUISANT LES OCCLUSIONS

Patent Applicant/Assignee:

PERCUSURGE INC, 540 Oakmead Parkway, Sunnyvale, CA 94085, US, US (Residence), US (Nationality)

Inventor(s):

PATEL Mukund R, 427 Ridgefarm Drive, San Jose, CA 95123, US, MCGILL Scott A, 129 Hillview Avenue, Redwood City, CA 94062, US, ZADNO-AZIZI Gholam-Reza, 8213 Del Monte Avenue, Newark, CA 94560, US, ERRAZO Arlene L, 953 East Duane Avenue, Sunnyvale, CA 94085, US Legal Representative:

ALTMAN Daniel E (agent), Knobbe, Martens, Olson & Bear, LLP, 620 Newport Center Drive, 16th floor, Newport Beach, CA 92660, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200158382 A2 20010816 (WO 0158382)

Application:

WO 2001US4457 20010209 (PCT/WO US0104457)

Priority Application: US 2000181663 20000211; US 2000505554 20000217

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ CZ (utility model) DE DE (utility model) DK DK (utility model) DM DZ EE EE (utility model) ES FI FI (utility model) GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SK (utility model) SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

- (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
- (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
- (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
- (EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 14091

English Abstract

There is provided a filter for use with a vascular occlusion device of the type having an elongated shaft and a number of radially expandable struts located near a distal end of said shaft. The filter comprises a hollow body made of a flexible material, with a proximal end and a distal end, and a region of maximum widthwise dimension located between the proximal end and the distal end. The body tapers from the proximal end to the region of maximum widthwise dimension and from the region of maximum widthwise dimension to the distal end. A number of pores are formed in the body, and the pores being sized to prevent emboli from flowing past the distal end when the filter is employed in the vasculature of a patient. Also disclosed are a web for preventing formation of thrombus on the struts of a vascular occlusion device, and a method for removing accumulated emboli from a filter.

20/3,AB/4 (Item 4 from file: 349) DIALOG(R)File 349:PCT FULLTEXT

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00778916

OCCLUSION OF A VESSEL

OCCLUSION DE VAISSEAU

Patent Applicant/Assignee:

PERCUSURGE INC, 540 Oakmead Parkway, Sunnyvale, CA 94086, US, US (Residence), US (Nationality)

Inventor(s):

ZADNO-AZIZI Gholam-Reza , 8213 Del Monte Avenue, Newark, CA 94560, US Legal Representative:

ALTMAN Daniel E, Knobbe, Martens, Olson & Bear, LLP, 16th Floor, 620

Serial 09/438030 Searcher: Jeanne Horrigan

February 25, 2002

Newport Center Drive, Newport Beach, CA 92660, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200112104 A1 20010222 (WO 0112104)

Application: WO 2000US21645 20000808 (PCT/WO US0021645)

Priority Application: US 99374741 19990813

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ CZ (utility model) DE DE (utility model) DK DK (utility model) DM DZ EE EE (utility model) ES FI FI (utility model) GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SK (utility model) SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English Filing Language: English

Fulltext Word Count: 9479

English Abstract

A device for occluding a vessel employs one of a number of different expansion members joined to one or more elongate members. The expansion member may include a braid, one or more coils, ribs, a ribbon-like structure, a slotted tube, or a filter-like mesh. If the expansion member is enclosed by a suitable membrane, the device seals with the vessel wall to partially or completely occlude the vessel. A perforated membrane may be used to permit the perfusion of blood. The expansion member may be self-expanding, or it may be expanded by engaging it with one of the elongate members. Alternatively, the expansion member may be expanded by heating it.

20/3, AB/7 (Item 7 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00510707 OCCLUSION OF A VESSEL OCCLUSION D'UN VAISSEAU Patent Applicant/Assignee: PERCUSURGE INC, Inventor(s): ZADNO-AZIZI Gholam-Reza , BAGAOISAN Celso J, PATEL Mukund R, MUNI Ketan P Patent and Priority Information (Country, Number, Date): WO 9942059 A2 19990826 Patent: WO 99US3544 19990219 (PCT/WO US9903544) Application: Priority Application: US 9826106 19980219 Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English Fulltext Word Count: 6236 English Abstract February 25, 2002

A device for occluding a vessel employs one of a number of different expansion members joined to one or more elongate members. The expansion member may include a braid, one or more coils, ribs, a ribbon-like structure, a slotted tube, or a filter-like mesh. If the expansion member is enclosed by a suitable membrane, the device seals with the vessel wall to partially or completely occlude the vessel. A perforated membrane may be used to permit the perfusion of blood. The expansion member may be self-expanding, or it may be expanded by engaging it with one of the elongate members. Alternatively, the expansion member may be expanded by heating it.

20/3, AB/9 (Item 9 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00448582 CATHETER SYSTEM FOR EMBOLI CONTAINMENT ENSEMBLE CATHETERS DE CONFINEMENT D'EMBOLUS Patent Applicant/Assignee: PERCUSURGE INC, Inventor(s): ZADNO-AZIZI Gholam-Reza , BAGAOISAN Celso J, MUNI Ketan P Patent and Priority Information (Country, Number, Date): Patent: WO 9839046 A1 19980911 WO 98US4485 19980306 Application: (PCT/WO US9804485) Priority Application: US 97812570 19970306 Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG English Abstract A multi- catheter (20, 22 and 24) emboli containment system is disclosed

which is adapted to provide at least one pair of optimized paths (30 and 32) for irrigation and aspiration fluid flow. Through careful design of the cross-sectional area of these paths, the present system is able to be compactly utilized in even the smaller sized blood vessels. The catheter system itself is provided with occlusive devices (26 and 28) to form an emboli containment chamber in which irrigation and aspiration occur. The catheter system of the present invention provides an improved emboli containment and removal system which can be utilized in a wide range of vessel diameters. The system is easy to use and can quickly and efficiently evacuate the containment chamber.

20/3, AB/10 (Item 10 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00448465 INTRAVASCULAR ASPIRATION SYSTEM SYSTEME D'ASPIRATION INTRAVASCULAIRE Patent Applicant/Assignee: PERCUSURGE INC, Inventor(s): MUNI Ketan P ,

ZADNO-AZIZI Gholam-Reza

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9838929 A1 19980911

Application:

WO 98US4366 19980306 (PCT/WO US9804366)

Priority Application: US 97813807 19970306

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English Fulltext Word Count: 8279

English Abstract

Catheters and method for the treatment of stenosis or an occlusion (56) in a blood vessel (5) in which an occlusive device (52) is first delivered and the occlusive device (52) activated at a site distal to the occlusion (56) to at least partially occlude the vessel (5) and create a working space surrounding the occlusion (56). A therapy catheter is then introduced to treat the occlusion (56) and a debris removal device (60) is delivered to aspirate debris (58) from the vessel (5). The need for a separate irrigation catheter and irrigation fluid is eliminated, which allows the procedure to be performed quickly and efficiently. The catheters and method are especially useful in the removal of occlusion from saphenous vein grafts, the coronary and carotid arteries, arteries above the aortic arch and vessels of similar size and pressure.

20/3,AB/11 (Item 11 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00403338 CATHETER FOR EMBOLI CONTAINMENT -CATHETER POUR SYSTEME DE CONFINEMENT D'EMBOLUS Patent Applicant/Assignee: PERCUSURGE INC, Inventor(s): BAGAOISAN Celso J, HA Hung V, PATEL Mukund R, ZADNO-AZIZI Gholam-Reza Patent and Priority Information (Country, Number, Date): Patent: WO 9744082 A2 19971127 WO 97US8467 19970519 (PCT/WO US9708467) Application: Priority Application: US 96650464 19960520; US 97813023 19970306 Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL TS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN . MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN YU GH KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG Publication Language: English Fulltext Word Count: 9188 English Abstract

Disclosed herein is a catheter for use in an emboli containment system. In one embodiment, the catheter has a tubular body with a metallic braid construction. Two lumen extend through the tubular body, the lumen being in a side-by-side configuration. One of the lumen functions as an

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February 25, 2002

inflation lumen, and is in fluid communication with an inflatable balloon mounted on the distal end of thecatheter. The second lumen is adapted to receive other therapeutic catheters which comprise the emboli containment system.

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File 348: EUROPEAN PATENTS 1978-2002/Feb W02
File 349:PCT FULLTEXT 1983-2002/UB=20020214,UT=20020207
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               PN="WO 200054673"
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           2 PN="WO 9838930"
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10940673
          20586182
                     PMID: 11202596
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         96342502
                     PMID: 8720209
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Searcher: Jeanne Horrigan February 25, 2002

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05674358 88155861 PMID: 3126315

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Nov 1987

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04831662 85063096 PMID: 6209679

Automatic implantable cardioverter-defibrillator structural characteristics.

Nov 1984

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04215352 81196920 PMID: 7231243

Improving intramuscular pH needle electrode stability.

Mar-Apr 1981

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04069987 83252973 PMID: 6869271

The automatic implantable defibrillator: local ventricular bipolar sensing to detect ventricular tachycardia and fibrillation.

Aug 1983

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04069065 83227852 PMID: 6858865

Clinical evaluation of the internal automatic cardioverter-defibrillator in survivors of sudden cardiac death.

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03491906 80198911 PMID: 261628

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03355147 77049088 PMID: 136370

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01774683 73080997 PMID: 4647389

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Oct 1972

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01299787 72163910 PMID: 5067238

"Blister cells". Association with pregnancy, sickle cell disease, and pulmonary infarction.

Mar 27 1972

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DIALOG(R) File 155: MEDLINE(R)

00757091 70014774 PMID: 5347181

Combined procedure of aspiration termination and laparoscopic sterilization.

Steptoe PC; Imran M British medical journal (ENGLAND) Sep 27 1969, 3 (673) p751-2, ISSN 0007-1447 Journal Code: B4W Languages: ENGLISH Document type: Journal Article Record type: Completed Record Date Created: 19691206 7/6/7 08978536 96255086 PMID: 8829558 Positioning a right atrial air aspiration catheter using transesophageal echocardiography. Apr 1996 7/6/8 08684321 96104626 PMID: 8533931 Placement of a right atrial air aspiration catheter guided by transesophageal echocardiography. Dec 1995 7/6/9 08660678 96071747 PMID: 7486162 Evaluation of a double-lumen multiorifice catheter for resuscitation of swine from lethal venous air embolism . 1 4 Nov 1995 7/6/10 08552859 95329678 PMID: 7605964 [The percutaneous treatment of surgical and catheter-angiographic vascular complications] Jun 1995 7/7/11 DIALOG(R) File 155: MEDLINE(R) 05022215 86238065 PMID: 3716719 [The surgical treatment of pulmonary embolism] De chirurgische behandeling van het longembool. Bleyn J; Haenen L Acta chirurgica Belgica (BELGIUM) Mar-Apr 1986, 86 (2) p106-8, ISSN 0001-5458 Journal Code: 0H8 Languages: DUTCH Document type: Journal Article Record type: Completed Acute pulmonary, embolism with major hemodynamic derangement may be treated by thrombolysis or surgically by direct pulmonary embolectomy under cardiopulmonary bypass or by a transvenous method with a steerable aspiration catheter unit. The key to success in massive pulmonary embolism is a quick and correct diagnosis while the vital haemodynamic parameters are maintained by supportive means. Record Date Created: 19860627 7/7/13

Treatment of massive pulmonary embolism with pulmonary artery aspiration employing cardiopulmonary bypass. An experimental study.

DIALOG(R)File 155:MEDLINE(R)

00841870 70163141 PMID: 5439685

, 7

aspiration

Serial 09/438030 Searcher: Jeanne Horrigan February 25, 2002

Taguchi K; Okumori M; Kay JH Journal of thoracic and cardiovascular surgery (UNITED STATES) May 1970, 59 (5) p645-54, ISSN 0022-5223 Journal Code: K9J Languages: ENGLISH Document type: Journal Article Record type: Completed Record Date Created: 19700603 File 155:MEDLINE(R) 1966-2002/Feb w3 Items Description AU="IMRAN M":AU="IMRAN MA" S1 14 · S2 AU="AZIZI G" 1 S1 AND S2 S3 0 15 S1:S2 S 4 S5 53 ASPIRATION () CATHETER? 61422 EMBOLI? S6 **S**7 13 S5 AND S6 ***** 29/3,AB/3 (Item 3 from file: 94) DIALOG(R) File 94: JICST-EPlus (c) 2002 Japan Science and Tech Corp(JST). All rts. reserv. 02813516 JICST ACCESSION NUMBER: 96A0776520 FILE SEGMENT: JICST-E Therapy for Acute Pulmonary Embolism in Patients with Contraindication for Thrombolysis . INOUE ICHIRO (1); TAKANASHI ATSUSHI (1); FUKUDA YUKIHIRO (1); SAKAI KEN'YA (1); SUENAGA KENJI (1); WAKAMOTO ATSUO (1); FUJIOKA YOSHIMI (1); KAWAMOTO YUKIHIKO (1); HAMASAKI OSAMU (1) (1) Koritsumiyoshichuobyoin Myakkangaku (Journal of Japanese College of Angiology), 1996, VOL.36, NO.8, PAGE.427-430, FIG.2, TBL.1, REF.17 JOURNAL NUMBER: Z0216BAD ISSN NO: 0387-1126 UNIVERSAL DECIMAL CLASSIFICATION: 616.2-089 LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan DOCUMENT TYPE: Journal ARTICLE TYPE: Short Communication MEDIA TYPE: Printed Publication ABSTRACT: Strategy for treatment of acute pulmonary thromboembolism in patients with contraindication for thrombolysis were analyzed. Eighteen cases of pulmonary thromboembolism were classified into two groups: Group I (n=8); contraindication for thrombolysis and Group II (n=10); received with thrombolysis . Group I consisted of 6 patients with acute cerebral hemorrhage or craniotomy and 2 elderly patient. Group I received the clot aspiration by a large lumen-guiding catheter, the mechanical clot fragmentation by a guidewire, and the percutaneous implantation of inferior vena cava filter. Success rates of the clot aspiration, the mechanical clot fragmentation, and the implantation of filter were 50%, 100%, and 100%, respectively. Thrombolytic therapy with urokinase was performed in Group II. Although there was no difference in the systolic pulmonary pressure

(50.+-.16 in Group I vs 52.+-.9 mmHg in Group II), the normalization time of pulmonary pressure was shorter in Group II than that in Group I

by the guide catheter , the mechanical clot fragmentation by the guidewire , and the percutaneous implantation of the inferior vena cave

(0.8.+-.0.7 vs 2.1.+-.1.2 days). In conclusion, the clot

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filter should be firstly considered in patients with contraindication for thrombolysis therapy. (author abst.)

(Item 10 from file: 94) 29/3.AB/10

DIALOG(R) File 94: JICST-EPlus

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JICST ACCESSION NUMBER: 94A0909092 FILE SEGMENT: JICST-E

Strategy of Treatment for Acute Massive Pulmonary Embolism in Patients with Contraindication for Thrombolysis .

INOUE ICHIRO (1); TAKANASHI ATSUSHI (1); INOUE TOSHIAKI (1); YAMAUCHI RYO (1); KODAMA NOBUYA (1); TERADA MITSUKAZU (1); HATA JIRO (1); YOSHIDA YASUHIRO (1); WAKAMOTO ATSUO (1)

(1) Miyoshichuobyoin

Myakkangaku (Journal of Japanese College of Angiology), 1994, VOL.34, NO.10, PAGE.875-879, FIG.4, TBL.1, REF.14

ISSN NO: 0387-1126 JOURNAL NUMBER: Z0216BAD

UNIVERSAL DECIMAL CLASSIFICATION: 616.12-089

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper MEDIA TYPE: Printed Publication

ABSTRACT: Therapeutic methods of acute pulmonary embolism in patients with contraindication for thrombolysis were analyzed. Ten cases of pulmonary embolism were classified into two groups: Group I (n=5); contraindication for thrombolysis and Group II (n=5); received with thrombolysis . Group I consisted of 4 patients with acute cerebral hemorrhage and 1 elderly patient. There were no differences in the age and the symptoms of onset. Group I received the clot aspiration by a large lumen-guiding catheter, the mechanical clot fragmentation by a guidewire , and the percutaneous implantation of inferior vena cava filter. Success rates of the clot aspiration , the mechanical clot fragmentation, and the implantation of filter were 25%, 100%, and 100%, respectively. Thrombolytic therapy with urokinase (mean dose 34.2.+-.12.5 million units) was performed in Group II. Although there was no difference in the systolic pulmonary pressure (52.2.+-.6.8 in Group I vs 50.4.+-.4.5mmHg in Group II), the normalization time of pulmonary pressure was shorter in Group II than that in Group cardiac arrest unresponsive to cardiopulmonary resuscitation before treatment and one case in Group II was died of multiple organ failure. The other cases in both groups were discharged without reattack of pulmonary embolism . In conclusion, the clot aspiration by the guide catheter, the mechanical clot fragmentation by the quidewire, and the percutaneous implantation of the inferior vena cava filter should be considered in patients with contraindication for thrombolysis therapy. (author abst.)

29/3,AB/13 (Item 13 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

07581543 92263893 PMID: 1585709

[Transluminal coronary extraction atherectomy. Method, acute results, angiographic and clinical follow-up]

Transluminale koronare Extraktionsatherektomie. Methode, Akutergebnisse, angiographischer und klinischer Verlauf.

Pizzulli L; Kohler U; Manz M; Luderitz B

Medizinische Univ.-Klinik, Innere Medizin-Kardiologie, Bonn.

Zeitschrift fur Kardiologie (GERMANY) Mar 1992, 81 (3) p133-9,

ISSN 0300-5860 Journal Code: XW7

Languages: GERMAN

Document type: Journal Article

Record type: Completed

Transluminal coronary extraction-endarterectomy is an alternative interventional approach for treatment of coronary artery disease. The atherectomy system consists of a catheter assembly including a cutter and torque tube which is rotated at a relatively low rate of 750 rotations per minute, when introduced to the coronary artery over a guide - wire via a guiding catheter. Excised tissue is withdrawn from the coronary artery by suction applied through the catheter by means of an attached vacuum bottle. We report acute results in 18 patients and the clinical outcome of 14 patients who up to now underwent angiographic follow-up catheterization after 6 months. Initial angiographic success (residual stenosis less than 50%) using TEC-atherectomy alone was obtained in 6/18 patients (33%), 11/18 patients (60%) required additional PTCA in order to achieve primary success (9/18) or to treat total occlusion (2/18) after TEC-atherectomy. Major complications consisted in 1-vessel perforation non-Q-wave-infarction but no need of surgical intervention and 2 occlusions due to dissection (treated with PTCA). 14 patients underwent angiographic follow-up (6 months) and restenosis (greater than 50%) was confirmed in 7 patients (50%). Considering the low primary success rate of TEC-atherectomy alone and the tendency to high restenosis rate, we cannot recommend it as an alternative to conventional PTCA in general clinical practice. Further studies should be designed to directly compare TEC-atherectomy to PTCA in specific patient subgroups (e.g. bypass grafts, thrombus , diffuse disease) in order to define the role of intraluminal this interventional device.

29/3, AB/14 (Item 14 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

06937931 94084178 PMID: 1341611

Interventional angiology.
Mahler F; Do DD; Triller J

Department of Medicine, Inselspital, Bern, Switzerland.

European journal of medicine (FRANCE) Sep 1992, 1 (5) p295-301,

ISSN 1165-0478 Journal Code: BYE

Languages: ENGLISH

Document type: Journal Article; Review; Review, Tutorial

Record type: Completed

Percutaneous transluminal angioplasty in peripheral artery occlusive disease by balloon catheters is the standard method in interventional angiology. For almost twenty years it has been recommended in the aorto-iliac region for arterial stenoses, and in the femoro-popliteal arteries for stenoses and short occlusions. Due to progress in technology of catheters and guide wires , a primary success rate of more than 90% is to be expected with favourable angiographic conditions. The long-term patency rate of some 90% on the aorto-iliac level exceeds that of 70-90% on the femoro-popliteal level. The patency rate decreases with increasing complexity of the lesions. Subacute/acute occlusions of femoro-popliteal arteries by thrombosis or embolism are treated successfully in 80% of cases by catheter - thrombolysis and/or thrombus aspiration combined with percutaneous transluminal angioplasty if necessary. Several new techniques are under clinical evaluation, such as laser angioplasty, rotational catheters , atherectomy catheters and stents. Their application in clinical routine has up to now not been

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29/3,AB/15 (Item 15 from file: 73)

DIALOG(R) File 73: EMBASE

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05088810 EMBASE No: 1992229026

Aspiration thrombectomy for removal of coronary thrombus

Reeder G.S.; Lapeyre A.C.; Edwards W.D.; Holmes Jr. D.R.

Division of Cardiovascular Diseases, Mayo Clinic and Mayo Foundation, 200 First Street SW, Rochester, MN 55905 United States

American Journal of Cardiology (AM. J. CARDIOL.) (United States) 1992, 70/1 (107-110)

CODEN: AJCDA ISSN: 0002-9149 DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH

29/3, AB/16 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

07498983 92108389 PMID: 1837172

[Interventional angiography]

Interventionelle Angiologie.

Mahler F; Do D; Triller J

Angiologisch-gefasschirurgische Poliklinik, Medizinischen Universitatsklinik, Inselspital Bern.

Schweizerische medizinische Wochenschrift (SWITZERLAND) Dec 28 1991, 121 (51-52) p1931-5, ISSN 0036-7672 Journal Code: UEI

Languages: GERMAN

Document type: Journal Article

Record type: Completed

Percutaneous transluminal angioplasty (PTA) by balloon catheters is the standard method in interventional angiology. It is recommended in the aorto-iliac region for arterial stenoses, and in the femoro-popliteal arteries for stenoses and short occlusions . Due to progress in technology of catheters and guide wires, a primary success rate of more than 90% is to be expected with favorable angiographic conditions. The long-term patency rate of some 90% on the aorto-iliac level exceeds that of 70-90% on the femoro-popliteal level, with the patency rate decreasing with increasing complexity of the lesions. Subacute/acute occlusions of the femoro-popliteal arteries are treated successfully in 80% by catheter thrombolysis and/or thrombus aspiration . Several new techniques are under clinical evaluation, such as laser angioplasty, rotational catheters , atherectomy catheters and stents. Their application in clinical routine has up to now not been justified except for special situations such as obtaining biopsy material by Simpson catheter or maintenance of patency in balloon resistant lesions by stents.

29/3,AB/21 (Item 21 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

05484710 89367897 PMID: 2528169

New reperfusion devices: the Kensey catheter , the atherolytic reperfusion wire device, and the transluminal extraction catheter .

Wholey MH; Jarmolowski CR

Department of Radiological Sciences and Diagnostic Imaging, Shadyside Hospital, Pittsburgh, PA 15232.

Searcher: Jeanne Horrigan February 25, 2002

Radiology (UNITED STATES) Sep 1989, 172 (3 Pt 2) p947-52, ISSN 0033-8419 Journal Code: QSH

Languages: ENGLISH X

Document type: Journal Article

Record type: Completed

Substantial interest exists in the development of reperfusion and recanalization devices that would aid in the management of both peripheral vascular and coronary artery occlusive disease. Several of these devices are now in multicenter investigative trials. The atherolytic reperfusion wire incorporates a 0.035-inch guide wire with a modified tip to recanalize the lumen through the totally obstructed vascular segment. Clinical experience in the initial 12 patients has been successful. The Kensey catheter, a high-speed rotational recanalization device, has been used in 110 patients in a multicenter trial. Technical success has been reported in 77% of the patients and clinical success in 55% of the patients, with follow-up periods of 3 months to 1 year. The transluminal extraction catheter (TEC) is a torque-controlled atherectomy catheter that incorporates an aspiration device into a distal rotational cutter. Consequently, distal embolization has not been a clinical problem in the 95 patients treated with the TEC catheter for peripheral vascular disease. Technical - success has been accomplished in 87 (92%) patients. Three-month follow-up studies in 16 patients showed that restenosis occurred in four, two of whom had undergone combined atherectomy and angioplasty.

29/3,AB/22 (Item 22 from file: 73)

DIALOG(R) File 73: EMBASE

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03751103 EMBASE No: 1988200539

Use of a flexible, 22-gauge trocar needle and an obturator for obstructed drainage catheter exchange

McLellan G.L.

Department of Radiology, University Hospital of Jacksonville, University of Florida, Jacksonville, FL 32209 United States

American Journal of Roentgenology (AM. J. ROENTGENOL.) (United States) 1988, 151/3 (521-522)

CODEN: AJROA ISSN: 0361-803X

DOCUMENT TYPE: Journal

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Herein is described a method for the exchange of obstructed catheters by using a flexible, 20-cm, 22-gauge trocar cannula set (Cook, Bloomington, IN) to penetrate the catheter wall near the obstruction. Access is maintained by placing a 0.018-in. (0.45-mm) mandrel guidewire through the needle cannula into the drainage site.

29/3,AB/23 (Item 23 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

06121629 86017678 PMID: 4048468

Spiral exchange cannula for the occluded drainage catheter

McCain AH; Vucinich JL; Hawkins J; Hawkins IF

Radiology (UNITED STATES) Nov 1985, 157 (2) p543-4, ISSN 0033-8419 Journal Code: QSH

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

A technique for exchange of occluded drainage catheters or

placement of two guide wires into a target using a spiral exchange cannula is described. A spiral exchange cannula with a preloaded sheath and threads at the distal end is "screwed" into the drainage catheter, and the sheath is advanced over the catheter. This method prevents dislodgment of the drainage catheter and also permits easy catheter exchange when the lumen of the drainage catheter is occluded.

29/3,AB/24 (Item 24 from file: 155) DIALOG(R)File 155:MEDLINE(R)

04543331 84150633 PMID: 6702700

Chronic percutaneous pericardial drainage with modified pigtail catheters in children.

Lock JE; Bass JL; Kulik TJ; Fuhrman BP

American journal of cardiology (UNITED STATES) Apr 1 1984, 53 (8) p1179-82, ISSN 0002-9149 Journal Code: 3DQ

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

To determine the safety and efficacy of chronic percutaneous pericardial drainage in children, pigtail catheters were inserted over curved under fluoroscopic control into the pericardial space in 7 guidewires consecutive childrem with pericardial effusion. Pericardiocentesis was therapeutic (for' tamponade) in 1 child, diagnostic in 4 and both therapeutic and diagnostic in 2. The children were 0.5 to 16 years old and weighed 5 to 65 kg. Underlying diagnoses included cancer (3 children), congenital heart disease (2 children) and immunodeficiency and hemolytic uremic syndrome (1 each). When unmodified pigtail catheters, designed for angiography, were used (as in the first 3 children), either the catheters clotted within 36 hours, necessitating operative pericardial drainage, or repeated heparin infusions were required to keep the catheter patent. However, when 8Fr catheters were modified by placing 0.050-inch side holes along the distal shaft, the catheters remained patent and effectively drained the pericardial space for 3 to 7 days. Heparin infusion was not required, no child managed with the modified catheters required subsequent drainage and no complications occurred. In conclusion, percutaneous pericardial drainage is safe, even in small children, and can be effective chronically if catheters with large drainage holes are used.

33/7/1 (Item 1 from file: 155) DIALOG(R) File 155: MEQLINE(R)

10194740 99303007 PMID: 10376514

An embolization containment device.

Oesterle SN; Hayase M; Baim DS; Teirstein PS; Ramee SR; Whitlow PL; Webb J; Virmani R

Massachusetts General Hospital, Harvard Medical School, Boston 02114, USA. oesterle.stephen@mgh.harvard.edu

Catheterization and cardiovascular interventions (UNITED STATES) Jun 1999, 47 (2) p243-50, ISSN 1522-1946 Journal Code: DBF

Languages: ENGLISH.

Document type: Journal Article

Record type: Completed

A coaxial catheter system for containment of distal embolization is described. Utilizing a novel 0.014" hypotube with a distal elastomeric occlusion balloon, the PercuSurge GuardWire functions as a guidewire while trapping distal embolization resulting from more proximal



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intervention. The particulate debris is evacuated with a single operator exchange aspiration catheter (Export catheter) prior to deflation of the distal occlusion balloon. This animal study confirmed the feasibility of concept. The system was easily delivered through tortuous coronary anatomy. The GuardWire served as an adequate rail for delivery of dilatation balloons and a multitude of stents. There was no evidence of deep wall damage from low-pressure inflation and apposition of the distal occlusion balloon.

Record Date Created: 19990729

33/7/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

10187020 99315470 PMID: 10385493

Prevention of distal embolization during saphenous vein graft lesion angioplasty. Experience with a new temporary occlusion and aspiration system. Carlino M; De Gregorio J; Di Mario C; Anzuini A; Airoldi F; Albiero R; Briquori C; Dharmadhikari A; Sheiban I; Colombo A

Istituto Scientifico San Raffaele, Centro Cuore Columbus, Milan, Italy. Circulation (UNITED STATES) Jun 29 1999, 99 (25) p3221-3, ISSN 0009-7322 Journal Code: DAW

Languages: ENGLISE

Document type: Journal Article

Record type: Completed.

BACKGROUND: Repeat coronary artery bypass graft surgery (CABG) associated with a high morbidity and mortality, rendering percutaneous treatment of saphenous vein graft (SVG) lesions an attractive alternative. However, percutaneous interventions of degenerated SVGs carries high risk of distal embolization. METHODS AND RESULTS: This study reports our initial experience with the PercuSurge GuardWire, a new device developed to prevent embolization during treatment of degenerated SVG. This device consists of a 190-cm-long, hollow 0.014-in guidewire with a central lumen connected to a distal occlusion balloon. A dedicated inflation device (the MicroSeal Adapter) was used to inflate the distal balloon and maintain complete lumen occlusion during balloon dilatation and stent implantation. A monorail aspiration catheter , connected to a vacuum syringe, was used to evacuate atherosclerotic and thrombotic debris. Angioplasty with stent implantation was performed in 15 degenerated SVGs (18 lesions). Procedural success was achieved in all patients with normal postprocedure flow (Thrombolysis in Myocardial Infarction grade 3). No distal embolization was observed. There were no major in-hospital adverse clinical events, including Q-wave /or non-Q-wave myocardial infarction, emergency CABG, or death. All patients were asymptomatic at discharge. CONCLUSIONS: This preliminary series supports the feasible use of the PercuSurge GuardWire retrieval of plaque debris and prevention of embolization in degenerated SVGs. The good tolerance of temporary occlusions without angiographic or clinical evidence of distal embolization represents encouraging early findings.

Record Date Created: 19990716

33/7/5 (Item 3 from file: 73)

DIALOG(R) File 73: EMBASE

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10758209 EMBASE No: 2000228772

Carotid stenting with cerebral protection: First clinical experience using the PercuSurge GuardWire system

Henry M.; Amor M.; Henry I.; Klonaris C.; Chati Z.; Masson I.; Kownator



Searcher: Jeanne Horrigan

February 25, 2002

S.; Luizy F.; Hugel M.

Dr. M. Henry, UCCT $_{\rm V}$ Polyclinique, 7 rue Parmentier, 54270 Essey-les-Nancy

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Journal of Endovascular Surgery (J. ENDOVASC. SURG.) (United States)

1999, 6/4 (321-331)

CODEN: JESUF ISSN: 1074-6218 DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 36

Purpose: To study the feasibility and safety of carotid angioplasty and stenting using a new cerebral protection device that temporarily occludes the distal internal carotid artery (ICA). Methods: Forty-eight high-risk patients (39 men, mean age 69.1 + /- 8 years, range 54 to 86) with 53 ICA stenoses underwent percutaneous angioplasty and stenting via the femoral approach under cerebral protection afforded by a 0.014-inch GuardWire balloon occlusion device. Mean stenosis was 82.1% +/- 9.65% (range 70 to 96) and mean lesion length was 16.0 + /- 7.5 mm (range 6 to 50). Thirty-three (62%) lesions were calcified, and 38 (72%) were ulcerated. Thirty-two (60%) of the lesions were asymptomatic. With the occlusion balloon inflated in the distal ICA, the lesion was dilated and stented. The area was cleaned by aspiration and flushed via an aspiration advanced over the wire. Blood samples were collected from the external carotid artery (ECA) and analyzed to measure the size and number of particles collected. Computed tomography and neurological examinations were performed the day after the procedure. Results: Immediate technical success was achieved in all patients with the implantation of 38 Palmaz stents, 8 Expander stents, and 11 Wallstents. Carotid occlusion was well tolerated in all patients but 1 who had multiple, severe carotid lesions and poor collateralization. Mean cerebral flow occlusion time was 346 +/- 153 seconds during predilation and 303 \pm 143 seconds during stent placement. Total mean flow occlusion time was 542 +/- 243 seconds. One immediate neurological complication (transient amaurosis) occurred in a patient who had an anastomosis between the external carotid (EC) and ICA territories. Debris was removed in all patients with a mean 0.8-mm diameter catheter. Conclusion: Cerebral protection with the GuardWire device is easy, safe, and effective in protecting the brain from cerebral embolism. Larger studies are warranted.

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File 155:MEDLINE(R) -1,966-2002/Feb W3
File 144: Pascal 19/3 \times 2002 / Feb W4
File 5:Biosis Previews(R) 1969-2002/Feb W3
File 6:NTIS 1964-2002/Mar W1
File 2:INSPEC 1969-2002/Feb W4
File
      8:Ei Compendex(R) 1970-2002/Feb W4
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Jan
File 238:Abs. in New Tech & Eng. 1981-2002/Feb
File 65:Inside Conferences 1993-2002/Feb W3
File 77:Conference Papers Index 1973-2002/Jan
File 73:EMBASE 1974-2002/Feb W3
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Feb W4
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 94:JICST-EPlus 1985-2002/Jan W2
File 35:Dissertation Abs Online 1861-2002/Feb
        Items Description
Set
S1
        12984 GUIDEWIRE? OR GUIDE()WIRE? ?
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Serial 09/438030 Searcher: Jeanne Horrigan

February 25, 2002

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196510
             ASPIRAT?
S2
      64367 SUCTION?
S3
S4
      376322 DRAIN?
S5
      426748 CATHETER?
      230069 EMBOL?
S6
s7
      451895 OCCLU?
S8
       1054 ATHEROEMBOL?
      942288 THROMB?
S9
      147211 CLOT? ? OR CLOTT???
S10
     294459 STENOSIS OR STENOTIC
S11
     875207 VESSEL? ?
S12
     3112440 VASCULA?
S13
     800304 VENOUS OR VENA OR VEIN? ?
S14
S15
    1923192 ARTERY OR ARTERI???
        490 S1 AND S2:S4 AND S5
S16
S17
    1777952 S6:S11
S18
     5310663 S12:S15
        145 S16 AND S17
S19
       12015 S2:S4(5N)S5
S20
S21
          58 S19 AND S20
         35 RD (unique items)
S22
             s19
S23
        145
S24
         85
              RD (unique items)
S25
         17
              S24/2002 OR S24/2001 OR S24/2000
         14 S24/1999 OR S24/1998
S26
         54 S24 NOT S25:S26
S27
S28
        26 S27 AND S22
S29
        26 Sort S28/ALL/PY,D
       504 S2(N)S5
S30
        11 S1 AND S30
S31
              S31 NOT S29
S32
         11
        6 RD (unique items)
S33
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20/3, AB, K/3
                (Item 2 from file: 636)
DIALOG(R) File 636: Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.
01248089 Supplier Number: 41306933
ROTARY CATHETER FOR HEART ATTACK TREATMENT
Biomedical Materials, pN/A
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May, 1990

Record Type: Fulltext Language: English

Document Type: Newsletter; Trade

Word Count: 403

system for cutting and removing an obstruction. It can be inserted and rotated over a guidewire and transmits rotation and torque to a tubular blade attached to its distal end from...

...material, says Shiber. The cut material can be removed through a central channel within the catheter by means of a suction pump. The rotary catheter could be produced in sizes down to around 1 mm in diameter and up

...effectively intervening when a patient is having a heart attack caused by a fresh blood clot formed on an atherosclerotic plaque which has developed over several years...

22/3,AB,K/1 (Item, 1 from file: 16) DIALOG(R) File 16: Gale Group PROMT(R) (c) 2002 The Gale Group. All rts. reserv. Supplier Number: 47167447 Retrograde approach for UPJ obstruction stands test of time Watson, Fiona Urology Times, p8 March, 1997 Language: English Record Type: Fulltext Document Type: Magazine/Journal; Trade Word Count: 653 the ureter, and facilitates passage of the ureteroresectoscope.' The stent is replaced with a superstiff guidewire at the beginning of the procedure. The wire is insulated with an open-end ureteral catheter to prevent electrocautery injury to the ureter. The catheter acts as a continuous drainage system from the renal pelvis once the wire is removed. The insulated ureteroresectoscope, allowing use... 22/3,AB,K/3 (Item 3 from file: 148) DIALOG(R) File 148: Gale Group Trade & Industry DB (c) 2002 The Gale Group. All rts. reserv. SUPPLIER NUMBER: 18518370 (USE FORMAT 7 OR 9 FOR FULL TEXT) 08829914 MEDTECH INNOVATION RAISES \$1.2 BILLION ON U.S. MARKETS - CLINICA WORLD MEDICAL DEVICE & DIAGNOSTIC NEWS -PR Newswire, p725NYTH083 July 25, 1996 RECORD TYPE: Fulltext LANGUAGE: English WORD COUNT: 334 LINE COUNT: 00034 for gynecological procedures featured prominently, including Imagyn's MicroSpan microhysteroscopy system, FemRx' Opera Star tissue aspirating resectoscope and Conceptus' transcervical micro- catheter and quidewire systems to access the Fallopian tubes. Clinica's review of medtech IPOs is published in... 22/3, AB, K/11 (Item 11 from file: 442) DIALOG(R) File 442:AMA Journals (c) 2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00047003 Copyright (C) 1989 American Medical Association Catheter Aspiration for Simple Pneumothorax; Experience With 114 Patients (PAPERS READ BEFORE THE 96TH ANNUAL MEETING OF THE WESTERN SURGICAL ASSOCIATION, SAN DIEGO, CALIF, NOV 14-16, 1988) DELIUS, RALPH E.; OBEID, FAROUCK N.; HORST, H. MATHILDA; SORENSEN, VICTOR J.; FATH, JOHN J.; BIVINS, BRACK A. Archives of Surgery July, 1989; 124: 833-836 LINE COUNT: 00199 WORD COUNT: 02750

ABSTRACT: Between 1983 and 1987, 114 adult patients with 131 pneumothoraces were treated utilizing catheter aspiration for simple pneumothorax as an alternative to tube thoracostomy. The causes of simple pneumothorax were as follows: 79 needle-induced, 36 spontaneous, and 16 traumatic. Thirty-eight of the pneumothoraces were small (<20% of volume), 55 were moderate (20% to 40% of volume), 36 were large (>40% of volume), and 2 were of unknown size. Overall, catheter aspiration for simple pneumothorax was successful in 90 patients (69%). The success rate was 75% with needle-induced, 53% with spontaneous, and 75% with traumatic

pneumothoraces. Small pneumothoraces were successfully managed with catheter aspiration for simple pneumothorax in 87% of patients, moderate-sized in 60%, and large in 61%. There were three complications (2.3%), including one hemothorax and two retained sheared catheter tips. The average cost per patient was \$ 868 for catheter aspiration, and \$ 6402 for a tube thoracostomy. These data support catheter aspiration as a safe, cost-effective, and successful technique for managing simple pneumothorax. ... met the entry criteria were treated according to the CASP protocol outlined in Fig 1.

Catheter aspiration for simple pneumothorax was carried out as a sterile procedure in the emergency department. The...
... the superior rib margin cephalad at approximately 60 degrees into the pleural space. A soft guide wire was then advanced through the needle. An 8F radiopaque polytetrafluoroethylene (Teflon) catheter was passed over the guide wire into the pleural cavity. The guide wire was removed, and a three-way stopcock and 50-mL syringe were connected to the catheter

The intrathoracic air was then aspirated. Full expansion of the lung was signaled by the inability to evacuate further air from...involves advancement of a guide wire through the needle, withdrawing the needle, and advancing the catheter over the guide wire.

Catheter aspiration was most successful with needle-induced and simple traumatic pneumothoraces. Traumatic pneumothoraces that did not...

encephalopathy and bacterial infections also have resulted from the TIPS procedure.

AUTHOR ABSTRACT: Objective. - To provide clinicians with a technology assessment of the safety and effectiveness of the use of a transjugular intrahepatic portosystemic shunt (TIPS) for reducing portal hypertension and its associated complications of esophageal varices and ascites. Participants. - A literature review and a Diagnostic and Therapeutic Technology Assessment (DATTA) survey questionnaire were mailed to 72 physicians with expertise in gastrointestinal or abdominal surgery or interventional radiology and a special interest in liver disease or esophageal varices. These panelists had been nominated to the DATTA panel by appropriate specialty societies and medical schools. A total of 54 panelists (75%) responded. Evidence. - Assessment was based on the expert opinion of the panelists, as well as on published scientific literature (available as of January 2, 1995). Published studies were identified by a MEDLINE search using the terms transjugular intrahepatic portosystemic shunt, TIPS, and transjugular and by review of the references cited in these primary sources. Consensus Process. - The respondents completed a DATTA survey questionnaire; the survey results were tabulated, analyzed, and interpreted by an American Medical Association staff physician. Conclusions. - The safety of TIPS was considered to be established in the acute control of bleeding from esophageal varices in patients who had failed sclerotherapy. The safety of TIPS was considered to be promising for long-term control of bleeding from esophageal varices. In patients with end-stage liver disease and esophageal varices who are liver transplant candidates, the use of TIPS was considered to be an established therapy. The effectiveness of TIPS was considered to be (1) established in the acute control of bleeding in patients who failed sclerotherapy; (2) promising for long-term control of bleeding from esophageal varices; and (3) established in patients with end-stage liver disease and esophageal varices who are candidates for liver transplants. (JAMA 1995;273:1824-1830)

... usually the right or middle hepatic vein) and a hepatic venogram is obtained. A stiff guide wire is placed in the catheter, and a 16-gauge



Colapinto needle is advanced into the...

...3 to 4 cm, usually guided to the portal vein by fluoroscopy, until blood is aspirated through the catheter. Contrast material can then be injected to determine which vascular structure has been entered. Portal... is usually achieved after one to three punctures. Once the portal vein is reached, a guide wire is advanced into it over which the Colapinto catheter and sheath are advanced as far...

26/3,AB,K/1 (Item 1 from file: 441)
DIALOG(R)File 441:ESPICOM Pharm&Med DEVICE NEWS
(c) 2002 ESPICOM Bus.Intell. All rts. reserv.
00038082 00041711 (USE FORMAT 7 OR 9 FOR FULLTEXT)
FDA clears Medtronic's temporary occlusion and aspiration system Medical Industry Week
11 June 2001 (20010611)
RECORD TYPE: FULLTEXT WORD COUNT: 395
COMPANY: Medtronic
TEXT:

...at the start of an interventional procedure, the GuardWire Plus system replaces the standard angioplasty guidewire during the entire procedure. The lesion is first crossed with the GuardWire Plus, which has...

...procedure remain suspended in the occluded vessel.

Upon completion of the interventional procedure, the Export aspiration catheter is advanced, and the atherosclerotic particles are aspirated. The GuardWire Plus balloon is then deflated...

26/3,AB/2 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.
02114800 67039633
Acquisition of PercuSurge device vaults Medtronic over competition Anonymous
Health Industry Today v64nl PP: 1, 18 Jan 2001 ISSN: 0745-4678
JRNL CODE: HIT
WORD COUNT: 1073

ABSTRACT: In October 2000, Medtronic Inc. bought PercuSurge Inc. and added it to its Medtronic Vascular organization. PercuSurge's device, generically called a distal protection product, may impact the \$2 billion stent market by creating an additional market as big or bigger. It consists of a blood-tipped guidewire that is inflated briefly to occlude blood flow and capture any material dislodged from the wall of the vessel during placement of a stent upstream. The product's first targeted indication is for the treatment of degenerated saphenous vein grafts that show signs of disease following heart bypass surgery. Research also seemed to support the contention that the devices will become widely used whenever doctors seek to clear obstructed arteries, not only in the heart but also in the brain, kidney and other sites. Dr. Donald S. Baim, a professor of Harvard Medical School, says that the device is not a case of one technology replacing another. Rather, he says, the devices will give physicians "progressive leverage" against problems associated with heart disease.

File 9:Business & Industry(R) Jul/1994-2002/Feb 21
File 16:Gale Group PROMT(R) 1990-2002/Feb 22
File 160:Gale Group PROMT(R) 1972-1989
File 98:General Sci Abs/Full-Text 1984-2002/Jan
File 148:Gale Group Trade & Industry DB 1976-2002/Feb 22



Serial 09/438030 Searcher: Jeanne Horrigan February 25, 2002 File 621: Gale Group New Prod. Annou. (R) 1985-2002/Feb 22 File 636: Gale Group Newsletter DB(TM) 1987-2002/Feb 22 File 441:ESPICOM Pharm&Med DEVICE NEWS 2002/Feb W3 File 20:Dialog Global Reporter 1997-2002/Feb 25 File 813:PR Newswire 1987-1999/Apr 30 File 15:ABI/Inform(R) 1971-2002/Feb 23 File 88:Gale Group Business A.R.T.S. 1976-2002/Feb 22 File 442:AMA Journals 1982-2002/Mar B1 File 444: New England Journal of Med. 1985-2002/Feb W4 File 457: The Lancet 1986-2000/Oct W1 Set Items Description GUIDEWIRE? OR GUIDE()WIRE? ? S1 4311 ASPIRAT? S2 140042 s3 21968 SUCTION? 244638 DRAIN? S4 S5 61522 CATHETER? 28831 EMBOL? S6 25333 OCCLU? s7 173 ATHEROEMBOL? 64492 THROMB? S8 S 9 123032 CLOT? ? OR CLOTT??? S10 10990 STENOSIS OR STENOTIC S11 S12 342251 VESSEL? ? S13 98204 VASCULA? 123379 VENOUS OR VENA OR VEIN? .? S14 126594 ARTERY OR ARTERI??? 77 S1(S)S2:S4(5N)S5 S15 S16 34 S16/2002 OR S16/2001 OR S16/2000 OR S16/1999 OR S16/1998 S17 S18 43 S16 NOT S17 S19 30 RD (unique items) S20 5 S6:S11(S)S19 25 S19 NOT S20 S21 25 Sort S21/ALL/PD,D S22 90 S2(N)S5 S23 68 S23 NOT S16 S24 0 S1(S)S24 S25 4 S1 AND S24

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20/7/2 (Item 2 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Derwent Info Ltd. All rts. reserv.
013992057
           **Image_available**
WPI Acc No: 2001-476272/200151
 Over-the-wire angioplasty device for compressing and removing atherosclerotic
plaques
Patent Assignee: KLETSCHKA H D (KLET-I)
Inventor: KLETSCHKA H D
Number of Countries: 094 Number of Patents: 002
Patent Family:
Patent No
             Kind Date
                           Applicat No
                                          Kind
                                                 Date
                                                          Week
WO 200156644 Al 20010809 WO 2001US1620 A
                                               20010117
                                                         200151
AU 200127941 A 20010814 AU 200127941
                                          Α
                                               20010117 200173
Priority Applications (No Type Date): US 2000718732 A 20001122; US
                 1 <
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Serial 09/438030
Searcher: Jeanne Horrigan
February 25, 2002
  2000495833 A 20000201
Patent Details:
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Patent No Kind Lan Pg Main IPC Filing Notes WO 200156644 A1 E 71 A61M-029/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW AU 200127941 A A61M-029/00 Based on patent WO 200156644

Abstract (Basic): WO 200156644 Al

NOVELTY - The device comprises a catheter (26) for insertion into a vessel like structure, the catheter having a catheter wall and a movable member. There is a trap (38) operably connected to the catheter wall and to the movable member, where relative motion between the catheter wall and the movable member actuates the trap. The catheter defines a guidewire lumen adapted to slidably receive the quidewire .

USE - Used for an angioplasty device for compressing and removing atherosclerotic plaques, thromboses, stenoses, occlusions, clots, potential embolic material from veins, arteries, vessels, ducts

ADVANTAGE - Is particularly suited for use in small diameter vessels and/or severely occluded vessels because it maximises suction for a given catheter diameter. Can also prevent all physiologically significant particles from escaping from the obstruction site. Large particles are captured beneath a contractible hood and removed when the catheter withdrawn.

DESCRIPTION OF DRAWING(S) - The drawing is a sectional view illustrating the size limits of a conventional five French catheter .

catheter (26)

trap (38)

pp; 71 DwgNo 1/30

Derwent Class: P34

International Patent Class (Main): A61M-029/00

(Item 5 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2002 Derwent Info Ltd. All rts. reserv.

013850626 . **Image available** WPI Acc No: 2001-334839/200135

Intravascular two-dimensional ultrasonographic imaging useful for reducing stenosis, involves providing catheter including flexible tubular element and internally housed drive cable

Patent Assignee: CARDIOVASCULAR IMAGING SYSTEMS (CARD-N)

Inventor: YOCK P G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week US 6221015 B1 20010424 US 86834893 19860228 200135 B Α US 88290533 Α 19881223 US 91649048 19910201 Α US 92826260 A 19920124 US 9314906 A 19930201 US 93162412 A 19931203

> US 95467178 A 19950606 US 99300168 A 19990427

Priority Applications (No Type Date): US 88290533 A 19881223; US 86834893 A 19860228; US 91649048 A 19910201; US 92826260 A 19920124; US 9314906 A 19930201; US 93162412 A 19931203; US 95467178 A 19950606; US 99300168 A 19990427

Patent Details:

Patent No Kind Lan Pg Main IPC US 6221015 B1 13 A61B-008/00

Filing Notes
CIP of application US 86834893
Cont of application US 88290533
Cont of application US 91649048
Cont of application US 92826260
Div ex application US 9314906
Cont of application US 93162412
Cont of application US 95467178
CIP of patent US 4794931
Cont of patent US 5000185
Div ex patent US 5313949
Cont of patent US 5676151
Cont of patent US 5865178

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Abstract (Basic): US 6221015 B1

NOVELTY - A blood vessel is ultrasonographically imaged and treated by providing a catheter including a flexible tubular element (154) and a flexible internally housed drive cable (166) for effective circumferential scan around the catheter of an ultrasonic generating device.

DETAILED DESCRIPTION - Imaging and treating a region of blood vessel using a catheter (151) involves advancing a catheter body having a distal region and an imaging device into the region to be treated through the blood vessel. The imaging device has a rotating reflector. An image of the region to be treated is generated by rotating the imaging device within the catheter body and reflecting an imaging signal off the rotating reflector. A balloon (41) disposed at the distal region of the catheter body is inflated such that the wall of the balloon contacts a partial or full occlusion in the blood vessel to apply a force to the occlusion to treat the region of the vessel.

USE - The method is used for intravascular two-dimensional ultrasonographic imaging, particularly for guiding and monitoring interventional therapy to reduce vascular stenosis. It can be also used in atherectomy and can be combined with interventional techniques such as balloon angioplasty, laser ablation angioplasty, balloon embolectomy, aspiration embolectomy, heat probe ablation, abrasion, drilling or therapeutic ultrasound. The catheters being utilized can also be used for introducing clot -dissolving drugs, such as tissue plasminogen activator, streptokinase, or urokinase in order to reduce stenosis. It can also be used for introducing platelet receptor blockers and drugs, which limit cell multiplication in order to inhibit restenosis.

ADVANTAGE - The invention makes it possible to obtain images in very small vessels and has made it possible to accomplish the same by utilizing the precision driving of a very flexible cable. The catheter in addition to being capable of imaging is also capable of being steered by the flexible guidewire (36) secured to the tip.

DESCRIPTION OF DRAWING(S) - The figure shows an enlarged cross-sectional view of a catheter apparatus.

Flexible guidewire (36) Balloon (41) Catheter (151) Flexible tubular element (154) Ultrasound transducer (157) Flexible drive cable (166) Rotating reflector (168) pp; 13 DwgNo 10/11 Derwent Class: B07; P31; S05 International Patent Class (Main): A61B-008/00 International Patent Class (Additional): A61B-008/12

20/7/9 (Item 9 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2002 Derwent Info Ltd. All rts. reserv. 013577606 **Image available** WPI Acc No: 2001-061813/200107

Apparatus for remò∜ing emboli during angioplasty or stenting procedures, has catheter having occlusion element, aspiration lumen, blood outlet port in communication with lumen, and venous return catheter with blood inlet port Patent Assignee: ARTERIA MEDICAL SCI INC (ARTE-N)

Inventor: OHKI T; PARODI J C

Number of Countries: 092 Number of Patents: 002

Patent Family:

Patent No Kind Date Applicat No Kind Date WO 200076390 A2 20001221 WO 2000US16393 A 20000614 200107 B 20010102 AU 200057389 AU 200057389 A Α 20000614 200121 Priority Applications (No Type Date): US 2000528958 A 20000320; US 99333074 A 19990614; US 99155120 P 19990922; US 99418727 A 19991015; US 2000528569 A 20000320

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 200076390 A2 E 42 A61B-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI ÞŘ\SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW AU 200057389 A A61B-000/00 Based on patent WO 200076390

Abstract (Basic): WO 200076390 A2

NOVELTY - The apparatus comprises a catheter (31) having an occlusion element (32), an aspiration lumen, and a blood outlet port in communication with the lumen, a guide wire having a balloon, a venous return catheter with a blood inlet port, and tubing that couples the blood outlet port to the blood inlet port. A blood filter, a flow sensor, a flow control valve, and/or a pump may also be included in-line with the tubing to better facilitate filtering of emboli from blood re-perfused into the patient and to better monitor and control the degree of flow reversal.

USE - For protecting against embolization during vascular interventions, e.g. carotid artery angioplasty, endartectomy, and stenting. For inducing controlled retrograde flow through the internal carotid artery during interventional procedure, without significant blood loss.

ADVANTAGE T Reduces risk of emboli being carried into the

cerebral vasculature .

DESCRIPTION OF DRAWING(S) - The drawing shows the balloon of the occlusion element inflated and retrograde flow established in the internal carotid artery .

Catheter (31)

Occlusion element (32)

pp; 42 DwgNo 5C/12

Derwent Class: P31

International Patent Class (Main): A61B-000/00

20/7/10 (Item 10 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Derwent Info Ltd. All rts. reserv.

013492597 **Image available**

WPI Acc No: 2000-664540/200064

Aspirating method for removing particles e.g. emboli , thrombi from human blood vessel , involves restricting flow of particles inside blood vessel and sucking out particles and some blood through catheter

Patent Assignee: PERCUSURGE INC (PERC-N)

Inventor: BAGAOISAN C; MUNI K P; ZADNO-AZIZI G R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 6135991 A 20001024 US 97813807 A 19970306 200064 B
US 9849857 A 19980327

Priority Applications (No Type Date): US 9849857 A 19980327; US 97813807 A 19970306

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 6135991 A 21 A61M-031/00 CIP of application US 97813807

Abstract (Basic): US 6135991 A

NOVELTY - The method involves inserting a guide wire (50) with an inflatable balloon (52) into the blood vessel (5), to form a barrier that restricts the flow of particles e.g. emboli (58) with the blood. An aspiring catheter (60), which slides over the guide wire, is inserted into the blood vessel until it tip reaches the vicinity of the particles.

DETAILED DESCRIPTION - Suction is then applied to the catheter , to induce flow of the particles and some blood into the catheter and out of the blood vessel .

USE - For removing particles e.g. emboli , thrombi from human blood vessel e.g. saphenous vein grafts, small coronary arteries , carotid and cerebral arteries , during treatment form e.g. stenosis , occlusion .

ADVANTAGE - Reduces treatment cost of stenosis, occlusion. Expedites removal of particles from blood vessel, thus allowing restoration of normal blood flow after short time period. Reduces risk of patient undergoing treatment. Ensures efficient aspirating process. Does not require use of separate irrigation catheter and irrigation fluid.

DESCRIPTION OF DRAWING(S) - The figure shows the partial isometric view of the aspirating process.

Blood vessel (5)

Guide wire (50)

Inflatable balloon (52)

Particles e.g. emboli (58)

Aspiring catheter (60) pp; 21 DwgNo 9/15 Derwent Class: P34 International Patent Class (Main): A61M-031/00 (Item 18 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2002 Derwent Info Ltd. All rts. reserv. **Image available** 012521063 WPI Acc No: 1999-327169/199927 Apparatus and methods for treating obstruction in a body lumen Patent Assignee: PROLIFIX MEDICAL INC (PROL-N) Inventor: KUPIECKI D J; MAH K M; PASSFARO J D; PATTERSON G R; WILLIAMS R G; HUYNH J; PASSAFARO J D; PERKINS R W; ROGERS L B Number of Countries: 022 Number of Patents: 005 Patent Family: Kind/\Date Patent No Applicat No Kind Date Week WO 9923958 **A**1 19990520 WO 98US23832 19981106 Α 199927 B EP 1030610 A1 20000830 EP 98960169 19981106 Α 200042 WO 98US23832 19981106 Α US 6139557 20001031 US 97966001 Α Α 19971107 200057 US 9881614 Α 19980413 US 9881631 Α 19980413 US 98103447 19981007 Α US 99290510 Α 19990412 US 6156046 20001205 US 97966001 Α Α 19971107 200066 JP 2001522631 W 20011120 WO 98US23832 19981106 Α 200204 JP 2000520060 19981106 Α Priority Applications (No Type Date): US 9881631 P 19980413; US 97966001 A 19971107; US 9881614 P 19980413; US 98103447 P 19981007; US 99290510 A 19990412 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes WO 9923958 A1 E 78 A61B-017/22 Designated States (National): CA JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE EP 1030610 A1 E A61B-017/22 Based on patent WO 9923958 Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE US 6139557 A61B-017/32 CIP of application US 97966001 Provisional application US 9881614 Provisional application US 9881631 Provisional application US 98103447 patent WO 9923958 US 6156046 A61B-017/22 97 A61B-017/22 JP 2001522631 W Based on patent WO 9923958 Abstract (Basic): WO 9923958 Al

NOVELTY - Apparatus and method for removing occluding material (OM) in a body lumen (BV) includes using a guide wire having a distal end section (200) that defines a three dimensional profile that is diametrically larger than the proximal section.

DETAILED DESCRIPTION - Apparatus and method for removing occluding material (OM) in a body lumen (BV) includes using a guide wire having a straight section and a distal end section (200) that defines a three dimensional profile that is diametrically larger than the

proximal section. As claimed the distal end section can be of a shape memory material of sufficient flexibility to assume a straight configuration when the wire is passed through a lumen of a guide member associated with another device or a catheter.

INDEPENDENT CLAIMS are also included for:

- (1) a system comprising a removal mechanism secured to the distal end of a torque member, a guide wire, and a catheter having a lumen through which the torque member extends;
- (2) a system comprising a catheter with a cutting member at its distal end and a guide wire which defines a curved path over which the catheter can be advanced;
- (3) an atherectomy catheter having a torque member with a tapered helical blade assembly at its distal end mounted so as to be rotatable in the catheter and with an annular lumen between the torque member and the catheter, and the blade having an interior open to the annular lumen;
- (4) a method of using such assemblies for removal of occluding material from a body lumen, or hyperplastic material from the interior of a stent within an artery;
- (5) A method of manufacturing a guidewire with a radially expansible guide section; and
- (6) A mandrel for shape setting a wire having a radially expansible guide section comprising a temperature stable core, at least one screw thread having spaced apart roots capable of mechanically removing a wire and having at least one retaining device.
- \mbox{USE} In the removal of occluding material from a body lumen, especially in the removal of hyperplastic material from the inside of a stent within an $\mbox{ artery }.$

ADVANTAGE - Allows treatment of blood vessels of various sizes, which can conform to a particular vessel size during treatment, and can be inserted in vessels which are almost totally occluded.

DESCRIPTION OF DRAWING(S) - The figure shows the device in use.

blood vessel (BV)

occluding \material (OM)

pilot lumeh (PL)

catheter (32)

removal mechanism (54)

guide section of the guide wire (200)

pp; 78 DwgNo 10H/11

Derwent Class: A96; P31; P34

International Patent Class (Main): A61B-017/22; A61B-017/32

International Patent Class (Additional): A61M-025/01

20/7/21 (Item 21 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012325696 **Image available**

WPI Acc No: 1999-131803/199911

Catheter guide wire introducer device for aspiration and insertion of a guide wire in a medical procedure e.g. venous catheterisation - has flexible bulb which is used to aspirate fluids into it via. needle lumen, with guide wire penetrable seal preventing exit of fluid or ingress of atmospheric air

Patent Assignee: MEDICAL COMPONENTS INC (MEDI-N)

Inventor: RAULERSON J D; SCHWEIKERT T M

Number of Countries: 083 Number of Patents: 005

Patent Family:

Serial 09/438030 Searcher: Jeanne Horrigan

February 25, 2002

Patent No Kind Date Applicat No Kind Date Week WO 9903417 Al 19990128 WO 98US11846 Α 19980609 199911 AU 9880619 Α 19990210 AU 9880619 19980609 199925 EP 932369 A1 19990804 EP 98928935 Α 19980609 199935 WO 98US11846 Α 19980609 JP 2001500776 W 20010123 WO 98US11846 Α 19980609 200107 JP 99507156 Α 19980609 US 6277100 B1 20010821 US 97896192 Α 19970717 200150 Priority Applications (No Type Date): US 97896192 A 19970717 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes A1 · 20 A61B-019/00 WO 9903417 Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9880619 A61B-019/00 Based on patent WO 9903417 Α EP 932369 A1 E A61B-019/00 Based on patent WO 9903417

Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI

JP 2001500776 W 23 A61M-025/08 Based on patent WO 9903417

US 6277100 A61M-005/178 B1

Abstract (Basic): WO 9903417 A

NOVELTY - The blood vessel is aspirated by piercing with a needle (52), with the vacuum created by releasing the flexible bulb (16) drawing blood from the vessel through the lumen (58) of the needle, the internal chamber (30), the channels and into the bulb. The wire penetrable seal (74) prevents passage of fluid to outside of the conduit (60) and ingress of air into the conduit. DETAILED DESCRIPTION - Independent claims are also included for a catheter quide wire introducing device, and a method for using the introducer 15 device.

USE - Used for aspiration of a body part and insertion of a wire into the body part in the medical field.

ADVANTAGE - Can be used with one hand and minimises the risk of contamination by blood borne pathogens (due to flashback flow) as well as reducing the risk of the introduction of air into the body cavity or an air embolism . DESCRIPTION OF DRAWING(S) - The drawing is a cross-sectional view of the catheter guide wire introducing device. (16) flexible bulb; (30) internal chamber; (52) introducer needle; (58) needle lumen; (60) needle conduit; (74) guide penetrable seal.

Dwg.3/6

Derwent Class: P31; P34

International Patent Class (Main): A61B-019/00; A61M-005/178; A61M-025/08 International Patent Class (Additional): A61M-001/00

20/7/23 (Item 23 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2002 Derwent Info Ltd. All rts. reserv. **Imagè<available** 012202433 WPI Acc No: 1999-008539/199901

Carotid arteries occluded vessels treatment method - uses catheters to position an inflated balloon up and downstream of stenosis, with guide wire and suction to reverse blood flow

Patent Assignee: PERCUSURGE INC (PERC-N)

Inventor: IMRAN M A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 5833650 A 19981110 US 95464579 A 19950605 199901 B

Priority Applications (No Type Date): US 95464579 A 19950605

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5833650 A 19 A61M-029/00

Abstract (Basic): U\$ 5833650 A

The occluded vessels treatment method involves advancing the end of a catheter assembly (11) having an inflatable balloon (16) into a blood vessel (67) until the balloon is positioned near a stenosis (76) in the vessel. The blood vessel maybe a saphenous vein graft or a carotid artery . The balloon is then inflated until it engages the side wall of the vessel to occlude the blood vessel . The flow of blood through the stenosis is then reversed by applying a suction through a balloon inflation lumen in the catheter assembly. A guide wire (46) is then advanced through the stenosis . A second catheter is advanced across the stenosis until it is positioned away from the stenosis . An inflatable balloon mounted to the second catheter is inflated. The guide wire is then removed and a blood free work space is provided between the two inflated balloons allowing medical procedures to be conducted to remove or reduce the stenosis .

ADVANTAGE- Prevents downstream flow of debris or emboli knocked off from the occlusion formed by the stenosis. Only necessary to stop blood flow in a vessel of patient for a short time period. Blood is shunted across the workspace. Amount of material removed from the stenosis can be precisely controlled.

Dwg.6c/15

Derwent Class: P34

International Patent Class (Main): A61M-029/00

20/7/24 (Item 24 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012176937 **Image available**

WPI Acc No: 1998-593848/199850

Percutaneous aspiration thrombectomy catheter system - has catheter shaft with haemostasis valve, guidewire and retaining device off centre within the catheter, and guide catheter with lumen with angled tip

Patent Assignee: BOSTON SCI CORP NORTHWEST TECHNOLOGY CEN (BOST-N)

Inventor: AUTH D C; DEVORE L J; GORDON L S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 5827229 A 19981027 US 95449203 A 19950524 199850

Priority Applications (No Type Date): US 95449203 A 19950524

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5827229 A 15 A61M-005/00

154

Serial 09/438030 Searcher: Jeanne Horrigan February 25, 2002

Abstract (Basic): US 5827229 A

The system has a catheter shaft (18) designed to be advanced through a haemostasis valve (22) and guide catheter (20) and over a guidewire (14) for placement of its distal end at a point proximal to a thrombus. The catheter shaft defines a longitudinally extending lumen. The catheter has a retainer for the guidewire within the catheter in a peripheral or non-centred part of the catheter cross-section. The distal tip of the catheter is angled back from the guidewire retainer to allow the catheter to follow the guidewire around tight bends and across restrictions easily.

A suction device (44) is in fluid communication with the proximal end of the catheter to provide a vacuum down the catheter lumen to the distal tip, to draw thrombus into the lumen. The lumen terminates in an angled tip at the distal end, the angled tip improves the removal of thrombus adhering to the vessel wall and reducing clogging of the hole with thrombus .

ADVANTAGE - more effective in sweeping arteries , in fibrinectomising clots that are free floating or not perfectly positioned. ${\tt Dwg.4/11}$

Derwent Class: P34

International Patent Class (Main): A61M-005/00

20/7/25 (Item 25 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012141412 **Image available**

WPI Acc No: 1998-558324/199848

Catheter for percutaneous removal of thromboembolic closing material - has distal end suction opening connected to dormia basket type similar extension which is made of highly elastic hollow wire

Patent Assignee: STARCK E (STAR-I)

Inventor: STARCK E 🔍

Number of Countries: <001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
DE 19715890 Al 19981022 DE 1015890 A 19970416 199848 B
Priority Applications (No Type Date): DE 1015890 A 19970416

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 19715890 A1 3 A61B-017/22

Abstract (Basic): DE 19715890 A

The catheter is arranged at the distal end with a suction opening and a dormia basket type extension. The extension is comprised of a highly elastic material, so that high pressure liquid can be injected through very narrow nozzles. The arteries or veins can be subjected to the pressure or a laser can be applied.

The nozzle jet is respectively aligned on a funnel suction opening of the catheter. The branches of the dormia basket are assembled together in a ball at the tip so that the vessel wall is not traumatised. A central opening in the ball enables the catheter to be used across a thin guide wire.

ADVANTAGE 7 Small opening introduction diameter, with relatively variable elastic working diameter can be achieved at vessel system using soft erection forces of basket extension. Provides mechanical removal with hydrodynamic jet nozzle system.

Dwg.1/1

Serial 09/438030 Searcher: Jeanne Horrigan

February 25, 2002

Derwent Class: P31; P34

International Patent Class (Main): A61B-017/22

International Patent Class (Additional): A61M-025/00

20/7/27 (Item 27 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012078649 **Image available**
WPI Acc No: 1998-495560/199842

Catheter system for, e.g. containing emboli resulting from occlusion treatment - has nested inner and main catheters each with distal end occlusion device and

defining chamber between devices that can be simultaneously irrigated

Patent Assignee: PERÇUSURGE INC (PERC-N)

Inventor: BAGAOISAN C J; MUNI K P; ZADNO-AZIZI G

Number of Countries: 082 Number of Patents: 004

Patent Family:

Patent No Kind Date Applicat No Kind Date Week WO 9839046 Al 19980911 WO 98US4485 Α 19980306 199842 AU 9863474 Α 19980922 AU 9863474 Α 19980306 199908 EP 969895 A1 20000112 EP 98907738 19980306 Α 200008 WO 98US4485 A 19980306 US 6022336 20000208 US 96650464 Α Α 19960520 200014 US 97812570 19970306 Α

Priority Applications (No Type Date): US 97812570 A 19970306; US 96650464 A 19960520

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9839046 A1 E 44 A61M-025/00

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9863474 A

A61M-025/00

Based on patent WO 9839046

EP 969895 A1 E

Based on patent WO 9839046

Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

US 6022336 A A61M-029/00 CIP of application US 96650464 Abstract (Basic): WO 9839046 A

A catheter system has an inner catheter (22) within a main catheter (24) so there is an irrigation or aspiration pathway (32) between them. Each catheter has an occlusion device (26, 28) at its distal end so the two devices define a chamber between them. The main catheter has a dedicated irrigation/aspiration port that permits simultaneous irrigation and aspiration within the chamber. Also claimed is the above catheter system where the occlusion devices are balloons. The balloon on the inner catheter is mounted on the distal end of a hollow guidewire (24) that extends through the inner catheter. A fluid pathway is placed between the guidewire and inner catheter.

USE - Catheter system for containing and removing emboli resulting from treatment of occlusions .

ADVANTAGE - The system can be used in small blood vessels and can be used with other common therapy devices.

Dwg.1/20

Derwent Class: B07; P34

International Patent Class (Main): A61M-025/00; A61M-029/00

International Patent Class (Additional): A61M-025/10

20/7/32 (Item 32 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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010284348 **Image available**
WPI Acc No: 1995-185607/199524

Appts. for removing emboli from intravascular site - comprises catheter which travels over guide wire and includes suction members for aspirating

Patent Assignee: RUGGIO J M (RUGG-I)

Inventor: RUGGIO J/MX

Number of Countries: 020 Number of Patents: 003

Patent Family:

Patent No Kind Date Applicat No Kind Date Week Al 19950511 WO 94US12804 WO 9512421 Α 19941104 199524 B AU 9511727 19950523 AU 9511727 Α Α 19941104 199535 US 5476450 19951219 US 93148156 Α 19931104 Α 199605 US 94177852 Α 19940105

Priority Applications (No Type Date): US 94177852 A 19940105; US 93148156 A 19931104

Cited Patents: EP 175096; EP 314896; EP 554616; US 4692139; US 5011488; WO 9210971

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9512421 A1 E 61 A61M-001/00

Designated States (National): AU CA JP

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

AU 9511727 A \sim A61M-001/00 Based on patent WO 9512421 US 5476450 A / \simeq 4 A61M-025/01 CIP of application US 93148156 Abstract (Basic): WO 9512421 A

The appts. comprises a catheter having an elongated tubular body, a distal end and a proximal end, and a guide which directs the distal end of the catheter into a blood vessel. A suction member is connected to the proximal end of the catheter for aspirating the free emboli at the distal end of the catheter through the elongated tubular body of the catheter.

The intravascular site is a pulmonary site.

USE/ADVANTAGE - A quick and safe removal of occlusions in intravascular or cardiac sites.

Dwg.1/15

Abstract (Equivalent): US 5476450 A

A method of removing free emboli from an intravascular site, comprising:

advancing a catheter having a distal end and a proximal end through a patient's vasculature until said distal end of said catheter extends into an area adjacent said site while said proximal end remains outside of said patient;

introducing & medication through said proximal end of said catheter to discharge said medication through said distal end of said catheter; and

aspirating said free emboli through said distal end of said catheter and out said proximal end of said catheter without breaking up said free emboli .

Dwg.4/15

Derwent Class: P31; P34

International Patent Class (Main): A61M-001/00; A61M-025/01

International Patent Class (Additional): A61B-017/22

20/7/34 (Item 34 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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008828356 **Image available**
WPI Acc No: 1991-332372/199145

Thrombus removing system - includes guide wire catheter having first balloon

inflatable for blocking blood vessel at position downstream of thrombus

Patent Assignee: YA W D (YAWD-I)

Inventor: YA W D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 5059178 A 19911022 US 91298547 A 19910118 199145 B

Priority Applications (No Type Date): JP 88194133 A 19880803

Abstract (Basic): US 5059178 A

A guide wire catheter includes a first balloon inflatable for blocking the blood vessel at a position downstream of the thrombus. A suction catheter includes a second balloon inflatable for substantially blocking the blood vessel at a position upstream of the thrombus.

A thrombus dissolving agent is supplied to a position between the first and second balloons, and dissolved thrombus is drawn through the suction catheter out of the body. An expansion catheter having a third balloon is used to expand, while allowing blood flows, a location of stricture remaining after removal of the dissolved thrombus.

USE - $For^{/}$ percutaneously removing a thrombus from a blood vessel by using catheters .

Dwg.3/21

Derwent Class: P34

International Patent Class (Additional): A61M-025/02

20/7/35 (Item 35 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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008203999 **Image available**

WPI Acc No: 1990-091000/199012

Catheter system for tunnelling lumen through arterial stenosis - has suction applied at proximal end to enhance plaque collection cut from stenosis at distal end

Patent Assignee: MEDINNOVATIONS INC (MEDI-N)

Inventor: FISCHELL R E; FISCHELL T A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 4898575 A /19900206 US 88205541 A 19880610 199012 B
Priority Applications (No Type Date): US 86874140 A 19860613; US 8791311 A

19870831; US 88205541 A 19880610

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 4898575 A 9

Abstract (Basic): US 4898575 A

The atherectomy catheter is advanced over a guide wire in the anterograde direction to the site of an arterial stenosis. The distal end of the catheter is centred around the guide wire which has been previously advanced through the stenotic lumen. The catheter is then advanced over the guide wire with its sharpened distal end cutting through the stenosis.

The atherectomy catheter can also employ rotation or vibration or an electrocautery current to enhance the cutting action. Suction applied at the catheter 's proximal end is used to enhance the collection of plaque cut from the stenosis at the catheter 's distal end. The cut plaque enters a single passageway that lies between the outer surface of the guide wire and the inner surface of the cylindrical catheter.

USE - For increasing blood flow Derwent Class: P31

International Patent Class (Additional): A61B-017/32

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File 350: Derwent WPIX 1963-2001/UD, UM &UP=200212
File 344: CHINESE PATENTS ABS APR 1985-2001/Dec
File 347: JAPIO Oct/1976-2001/Oct(Updated 020204)
File 371:French Patents 1961-2002/BOPI 200207
Set
       Items
               Description
S1
               GUIDEWIRE? OR GUIDE()WIRE? ?
        4188
S2
       15616 ASPIRAT?
S3
       204721
              SUCTION?
              DRAIN?
S4
      234344
S5
       23197 CATHETER?
        2818 EMBOL?
56
s7
       15491 OCCLU?
S8
           2 ATHEROEMBOL?
       18260 THROMB?
$9
       133095
S10
               CLOT? ? OR CLOTT???
S11
        1529 STENOSIS OR STENOTIC
S12
      281734 VESSEL? ?
S13
      14731 VASCULA?
S14
       11100 VENOUS OR VENA OR VEIN? ?
S15
       14060 ARTERY OR ARTERI???
         110 S1 AND S2:S4 AND S5
S16
               S6:S11 AND S16
S17
          43
S18
          35
               S12:S15 AND S17
S19
          35
               IDPAT (sorted in duplicate/non-duplicate order)
          35
S20
               IDPAT (primary/non-duplicate records only)
S21
           4
               S2(N)S5 AND S1
          0
               S21 NOT S19
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22/3,AB/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.
00655101
Suction catheter assembly

Aspirationskatheteranordnung Dispositif formant sonde d'aspiration PATENT ASSIGNEE:

Schneider (Europe) GmbH, (516666), Ackerstrasse 6, 8180 Bulach, (CH), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;IE;IT;LI;NL;SE) INVENTOR:

Cramer, M.B. P.D. Dr. med, Radiologische Klinik Klinikum Barmen, Heusenerstrasse 40 D-42283 Wuppertal, (DE) LEGAL REPRESENTATIVE:

Rottmann, Maximilian R. (26626), c/o Rottmann, Zimmermann + Partner AG Glattalstrasse 37, 8052 Zurich; (CH)

PATENT (CC, No, Kind, Date): EP 630617 A1 941228 (Basic) EP 630617 B1 980902

APPLICATION (CC, No, Date): EP 93110061 930624; PRIORITY (CC, No, Date): EP 93110061 930624

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; IE; IT; LI; NL; SE INTERNATIONAL PATENT CLASS: A61B-017/22;

ABSTRACT EP 630617 Al (Translated)

A suction catheter assembly for aspiration of thrombi and emboli from blood vessels has a central catheter (2) and an external catheter (1) surrounding the latter coaxially. For insertion of the catheter arrangement into a vessel and for dilating it, there are a guide wire (4) and a dilator (3). Removal of a blood clot is effected via reduced pressure applied on to the central catheter (2). If the central catheter (2) is blocked by the blood clot during aspiration of the latter the central catheter (2) can be pulled out of the external catheter (1) and replaced by a new central catheter (2). This new central catheter (2) can be connected to the aspiration device, and the process can be continued. Instead of inserting a new central catheter (2) the aspiration process can also be continued through the external catheter (1) by connecting it to the aspiration device after removal of the central catheter (2).

TRANSLATED ABSTRACT WORD COUNT: 158

LANGUAGE (Publication, Procedural, Application): German; German; FULLTEXT AVAILABILITY:

```
Available Text Language
                          Update
                                    Word Count
     CLAIMS B (English) 9836
                                      469
     CLAIMS B (German) 9836
                                      381
     CLAIMS B
                (French) 9836
                                      512
     SPEC B
                (German) 9836
                                     3325
Total word count - document A
Total word count - document B
                                     4687
Total word count - documents A + B
                                     4687
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22/3, AB/4 (Item 4 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00837048

METHODS AND SYSTEMS FOR ENHANCING FLUID FLOW THROUGH AN OBSTRUCTED VASCULAR SITE

PROCEDES ET SYSTEMES DESTINES A AMELIORER LA CIRCULATION FLUIDIQUE AU TRAVERS D'UN SITE, VASCULAIRE OBSTRUE

Patent Applicant/Assignee:

CORAZON TECHNOLOGIES INC, 199 Jefferson Avenue, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (For all designated states except: US) Patent Applicant/Inventor:

JOHANSSON Peter K, 199 Jefferson Avenue, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (Designated only for: US)
DELANEY David, 281 Casitas Boulevard, Los Gatos, CA 95032, US, US

English Abstract

(Residence), US (Nationality), (Designated only for: US) CONSTANTZ Brent, 199 Jefferson Drive, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (Designated only for: US) HANKERMEYER Christine, 199 Jefferson Drive, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (Designated only for: US) Legal Representative: FIELD Bret E (agent), Bozicevic, Field & Francis LLP, Suite 200, 200 Middlefield Road, Menlo Park, CA 94025, US, Patent and Priority Information (Country, Number, Date): WO 200170320 A1 20010927 (WO 0170320) WO 2001US7155 20010306 (PCT/WO US0107155) Application: Priority Application: US 2000528576 20000320; US 2001774469 20010130 Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Publication Language: English Filing Language: English Fulltext Word Count: 21102

Methods of enhancing fluid flow through a vascular site occupied by a vascular occlusion, as well as systems and kits for use in practicing the same, are provided. In practicing the subject methods, the vascular site is flushed simultaneously with a first dissolution fluid (e.g., an organic matter dissolution fluid and/or an inorganic matter dissolution fluid), and a second dissolution fluid attenuating fluid, where flushing is carried out in a manner such that only a surface of the vascular occlusion is contacted with the non-attenuated dissolution fluid. Examples of dissolution fluid/dissolution fluid attenuating fluid pairs include: (1) oxidizing agent fluid and fluid comprising oxidizable neutralizing agent; (2) surfactant fluid and phosphate buffered saline; (3) acidic solution and phosphate buffered saline; etc. Flushing is carried out in this manner for a period of time sufficient for fluid flow through the vascular site to be enhanced, e.g. increased or established. The subject methods, systems and kits for practicing the same find use in the treatment of a variety of different vascular diseases characterized by the presence of vascular occlusions, including both partial and total occlusions.

22/3,AB/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00812421
ENDOLUMINAL OCCLUSION-IRRIGATION CATHETER AND METHODS OF USE
CATHETER POUR OCCLUSION ET IRRIGATION ENDOLUMINALE, ET MODE D'UTILISATION
Patent Applicant/Assignee:
 SCIMED LIFE SYSTEMS INC, One SciMed Place, Maple Grove, MN 55311, US, US (Residence), US (Nationality)
Inventor(s):
 JANG Yue-Teh, 43659 Syke Road, Fremont, CA 94539, US,
 TSUGITA Ross, 1653 Gretel Lane, Mountain View, CA 94040, US,
 ADDIS Bruce, 905 Emerald Hill Road, Redwood City, CA 94061, US,

MAAHS Tracy, 1610 Nantucket Circle #213, Santa Clara, CA 95054, US, CHANG Jean, 320 Manzanita Avenue, Santa Clara, CA 95051, US, Legal Representative: SEAGER Glenn M (et al.) (agent), Crompton, Seager & Tufte, LLC, Suite 895, 331 Second Avenue South, Minneapolis, MN 55401, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200145572 A1 20010628 (WO 0145572) Application: WO 2000US34941 20001222 (PCT/WO US0034941) Priority Application: US 99470026 19991222 Designated States: , CX JP (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR Publication Language: English Filing Language: English English Abstract A catheter system comprising a guidewire, an endovascular catheter, and an aspiration catheter. The guidewire has an expandable occluder mounted on a distal end. The guidewire and the endovascular catheter , are insertable into a lumen of the aspiration catheter. The aspiration catheter also includes infusion and aspiration lumen(s) and port(s). Methods of using the catheter system for treating a vascular lesion and removing embolic material during the procedure are also disclosed. (Item 7 from file: 349) 22/3,AB/7 DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00782547 CATHETER DEVICES AND METHODS FOR THEIR USE IN THE TREATMENT OF CALCIFIED VASCULAR OCCLUSIONS DISPOSITIFS DE CATHETERS ET PROCEDES DESTINES A LEUR UTILISATION DANS LE TRAITEMENT D'OCCLUSIONS VASCULAIRES CALCIFIEES Patent Applicant/Assignee: CORAZON TECHNOLOGIES INC, 199 Jefferson Drive, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (For all designated states except: US) Patent Applicant/Inventor: CONSTANTZ Brent R, 199 Jefferson Drive, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (Designated only for: US) JOHANSSON Peter K, 199 Jefferson Drive, Menlo Park, CA 94025, US, US (Residence), US (Nationality), (Designated only for: US) DELANEY Dave, 199 Jefferson Drive, Menlo Park, Ca 94025, US, US (Residence), US (Nationality), (Designated only for: US) MCGURK Erin, 335 Lowell Avenue, Palo Alto, CA 94301, US, US (Residence), US (Nationality), (Designated only for: US) Legal Representative: FIELD Bret E (agent), Bozicevic, Field & Francis LLP, Suite 200, 200 Middlefield Road, Menlo Park, CA 94025, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200115767 A1 20010308 (WO 0115767) \< Application: WO 2000US23339 20000823 (PCT/WO US0023339) Priority Application: US 99384860 19990827; US 99425826 19991022 Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Publication Language: English Filing Language: English Fulltext Word Count: 17852 English Abstract Multi-lumen catheter devices/systems (50) and methods for their use in enhancing fluid flow through a vascular site occupied by a vascular occlusion are provided. In a first embodiment, the multilumen catheter devices (51) are/made up of a first, second and third lumen, where: (a) the first lumen (44) is used for delivery of an acidic dissolution solution (55) to the vascular site; (b) the second lumen (45) is used for delivery of a buffer solution to the vascular site; and (c) the third lumen (26) is used for removal of fluid from the vascular site. In a second embodiment, the second lumen (45) is not present, such that the subject catheters are made up solely of the first (44) and third lumens (26), i.e. an aspiration catheter (20) and an insert catheter (40), which insert catheter (40), may be either a total or partial insert catheter. In many preferred embodiments, the lumens of the various catheter components are coaxial. Also provided are systems and kits comprising the subject catheter devices. (Item 8 from file: 349) 22/3,AB/8 DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00782540 METHODS AND APPARATUS FOR ACCESSING AND TREATING BODY LUMENS METHODES ET APPAREIL PERMETTANT D'ACCEDER A DES LUMIERES CORPORELLES ET DE LES TRAITER Patent Applicant/Assignee: BACCHUS VASCULAR INC, 3260 Alpine Road, Portola Valley, CA 94028, US, US (Residence), US (Nationality) Inventor(s): EVANS Michael A, 637 Webster Street, Palo Alto, CA 94301, US, DEMARAIS Denise M, 1684 Cassiar Drive, San Jose, CA 95130, US, Legal Representative: HESLIN James M (et al) (agent), Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200115759 Al 20010308 (WO 0115759) Application: WO 2000US22695 20000817 (PCT/WO US0022695) Priority Application: US 99388294 19990901 Designated States: JP (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE Publication Language: English Filing Language: English Fulltext Word Count: 7283 English Abstract / Access to blood vessels and other body lumens is provided from

Access to blood vessels and other body lumens is provided from spaced-apart access penetrations. A penetrating device (10) is introduced through a first access penetration to a target site within the body lumen (27) and then used to penetrate outwardly from the body lumen to an external surface on an organ or the patient's skin. A guidewire (70) may then be deployed through the penetrating device, and the penetrating device removed to leave the guidewire in place. Catheters (12) and other interventional and diagnostic devices may then be introduced to the

Searcher: Jeanne Horrigan

February 25, 2002

target site from either or both of the first and second access penetrations over the same guidewire.

22/3,AB/13 (Item 13 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00578389

A MEDICAL DEVICE FOR REMOVING THROMBOEMBOLIC MATERIAL FROM CEREBRAL ARTERIES AND METKODS OF USE

DISPOSITIF MEDICAL PERMETTANT D'EXTRAIRE UN MATERIAU THROMBO-EMBOLIQUE D'ARTERES CEREBRALES; METHODE D'UTILISATION

Patent Applicant/Assignee:

COAXIA INC,

Inventor(s):

BARBUT Denise,

Patent and Priority Information (Country, Number, Date):

WO 200041762 A1 20000720 (WO 0041762)

Application:

WO 2000US420 20000106 (PCT/WO US0000420)

Priority Application: US 99228718 19990112

Designated States: CA JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT

Publication Language: English Fulltext Word Count: 7046

English Abstract

A medical device having an elongate catheter (1), a balloon occluder (12) mounted on a distal end (2) of the catheter (1), and optionally a chopping mechanism (7) associated with an aspiration port (6) of the catheter (1). Continuous or intermittent suction can be applied to the aspiration port '(6) which is distal to the occluder (12) to dislodge thromboembolic material in a carotid or cerebral artery. Oxygenated blood or other fluid, which may be hypothermic, can be perfused through at least one perfusion port (25) proximal to the occluder to maintain and augment perfusion of the collateral vasculature proximal to the occlusive lesion. The flow rate of blood or fluid can be controlled by rotating two cylindrical members. Neuroprotective agents or t-PA can also be infused distal to the occluder through the aspiration port (6) or an infusing port. Methods of using the devices in treating patients with acute stroke or occlusive cerebrovascular disease are also disclosed.

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22/3,AB/16
               (Item 16 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
BIOLOGICAL PASSAGEWAY OCCLUSION REMOVAL
ENLEVEMENT D'UNE OCCLUSION DANS UN PASSAGE BIOLOGIQUE
Patent Applicant/Assignee:
  DUBRUL William, , \
  FULTON Richard Eustis III,
Inventor(s):
  DUBRUL William,
  FULTON Richard Eustis III,
Patent and Priority Information (Country, Number, Date):
  Patent:
                        WO 9923952 A1 19990520
 Application:
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WO 98US23846 19981111 (PCT/WO US9823846)

Priority Application: US 9765118 19971112

Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English Fulltext Word Count: 6015 English Abstract

A device for the removal of a blockage in a passageway such as a dialysis graft (10) or in a body passageway includes a catheter for reception, aspiration of the blockage, and an occlusion engaging element (24) distal of the distal end of the catheter (16) which occlusion engaging element/is supported on a wire (22) that extends through the catheter (16). At the distal end of the catheter (16), there is a device such as a multi-wing malecot expansion device (18) that is expanded after the catheter (16) is placed in position so as to block the occlusion from passing around the outside of the catheter (16). The support wire (22) can be a movable core guide wire (22) which has braided device (24) on its distal end.

22/3,AB/19 (Item 19 from file: 349) DIALOG(R) File 349:PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00454518 PERCUTANEOUS ASPIRATION CATHETER SYSTEM SYSTEME DE CATHETER D'ASPIRATION PERCUTANEE Patent Applicant/Assignee: SCIMED LIFE SYSTEMS INC, Inventor(s): GORDON Lucas S, Patent and Priority Information (Country, Number, Date): WO 9844982 A1 19981015 Patent: WO 98US5411 19980319 (PCT/WO US9805411) Application: Priority Application: US 97822364 19970320 Designated States: CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE Publication Language: English Fulltext Word Count: 6903 English Abstract This invention is a percutaneous aspiration catheter (18) for removing thrombus or other emboli from blood vessels (10), and a method of extracting embolus pieces larger than the diameter of the catheter (18). The percutaneous aspiration catheter has barbs (60) positioned near its end to trap material within the catheter. 22/3,AB/26 (Item 26 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. APPARATUS AND METHOD FOR ASPIRATING INTRAVASCULAR, PULMONARY AND CARDIAC OBSTRUCTIONS PROCEDE ET APPARÉIL D'ASPIRATION D'OBSTRUCTIONS INTRAVASCULAIRES, PULMONAIRES ET CARDIAQUES Patent Applicant/Assignee: RUGGIO Joseph M, Inventor(s): RUGGIO Joseph M, Patent and Priority Information (Country, Number, Date): WO 9512421 A1 19950511 Patent: WO 94US12804 19941104 (PCT/WO US9412804) Application: Priority Application: US 93148156 19931104; US 94177852 19940105

Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Serial 09/438030 45

Searcher: Jeanne Horrigan

February 25, 2002

Publication Language: English Fulltext Word Count: 12627

English Abstract

Disclosed is an apparatus and technique for aspirating substances partially or completely occluding blood vessels or chambers of the heart. The aspirator assembly comprises a catheter assembly and a suction member for aspirating substances through the catheter. The catheter assembly comprises a catheter which travels over a guidewire . Exemplary suction members used for aspirating include a syringe or a vacuum reservoir. The method of treating the intravascular site comprises the steps of advancing a catheter assembly through a patient's vasculature until a distal end of the catheter assembly reaches an area close to the site, and aspirating occluding substances in the vicinity of the site through the distal end of the catheter assembly. The method may also include the additional steps of introducing medication through the catheter, and pulverizing the occlusion or any of its residue, prior to aspirating the occluding substances.

22/3,AB/27 (Item 27 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2002 WIPO/Univentio. All rts. reserv. 00292083 RHEOLYTIC OCCLUSION REMOVAL CATHETER SYSTEM AND METHOD SYSTEME DE CATHETERS D'ELIMINATION RHEOLITIQUE DES OCCLUSIONS ET PROCEDE CORRESPONDANT Patent Applicant/Assignee: LAKE REGION MANUFACTURING COMPANY INC, Inventor(s): DANCE Creg W, ERB Steven J, Patent and Priority Information (Country, Number, Date): Patent: WO 9510232 A1 19950420 Application: WO 94US11343 19941006 (PCT/WO US9411343) Priority Application: US 93134089 19931008 Designated States: CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE Publication Language: English Fulltext Word Count: 7869 English Abstract

A catheter system of this invention comprises elongate, hollow, inner (14) and outer (12) coaxial catheters having distal and proximate ends. The distal end of the outer catheter terminates short of the distal end of the inner catheter. The catheters may be independently movable with respect to each other. The inner catheter wall defines a central lumen (18) which fluidly couples the proximal and distal ends of the inner catheter and throùgh which a guide wire (60) can pass. The central lumen has a reduced diameter distal portion which, with an occluder means (e.g., a guide wire), is adapted to restrict distal fluid delivery therethrough. The distal end of the inner catheter is fluidly coupled to a diffusion manifold (28) which includes a plurality of fluid diffusion orifices. Located between the diffusion manifold and the distal end of the outer catheter is a diffuser (40). The diffuser, which may be fixedly or rotatably mounted, is located so that fluid exiting from the diffusion orifices impinges thereon and is dispersed toward the occlusion.

File 348: EUROPEAN PATENTS 1978-2002/Feb W03 File 349:PCT FULLTEXT 1983-2002/UB=20020214,UT=20020207 Searcher: Jeanne Horrigan

February 25, 2002

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Set
        Items
                Description
                GUIDEWIRE? OR GUIDE()WIRE? ?
S1
         5645
S2
        36393
                ASPIRAT?
S3
        49334
                SUCTION?
S4
        76710
                DRAIN?
S5
        24596
                CATHETER?
S6
         6049
                EMBOL?
        21166
                OCCLU?
s7
S8
          171
                ATHEROEMBOL?
S9
        27498
                THROMB?
                CLOT? ? OR CLOTT???
S10
        39151
S11
         4258
                STENOSIS OR STENOTIC
       111500
                VESSEL? ?
S12
        32821
                VASCULA?
S13
        28671
                VENOUS OR VENA OR VEIN? ?
S14
        27266
                ARTERY OR ARTERI???
S15
                S1(S)S2:S4(5N)S5
          121
S16
S17
        76235
                S6:S11
S18
       146221
                S12:S15
S19
           35
                S16(S)S17
           29
                S19(S)S18
S20
S21
           29
                IDPAT (sorted in duplicate/non-duplicate order)
           29
                IDPAT (primary/non-duplicate records only)
s22
S23
           17
                S2(N)S5(S)S1
                S23 NOT S20
S24
           5
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TITLES, DESCRIPTORS, OR KEY-WORD-IN-CONTEXT (NO BIBLIOGRAPHIC CITATIONS OR ABSTRACTS)

29/6/8 (Item 8 from file: 73) EMBASE No: 1994149422 05738682 Catheter modification for transrenal temporary total ureteral obstruction: The 'occlusive 'nephroureteral catheter 29/6/10 (Item 10 from file: 94) 02216643 JICST ACCESSION NUMBER: 94A0909092 FILE SEGMENT: JICST-E Strategy of Treatment for Acute Massive Pulmonary Embolism in Patients with Contraindication for Thrombolysis . , 1994 29/6/17 (Item 17 from file: 155) 07483710 92100939 PMID: 1759026 [Coronary angioplasty with a rotary atherotome] Angioplastia coronaria con aterotomo de rotacion. Aug-Sep 1991 29/6/18 (Item 18 from file: 155) 07405930 91299662 PMID: 2069931 Novel system for percutaneous cardiopulmonary bypass. 1991 (Item 19 from file: 155) 29/6/19 07200706 90161163 PMID: 2305098 Tube tamponade: potential pitfall in angiography of arterial hemorrhage associated with percutaneous drainage catheters . Mar 1990 29/6/20 (Item 20 from file: 155) 06551871 89072127 PMID: 2909119 Anastomosed ureters: fluoroscopically guided transconduit retrograde catheterization . Jan 1989 29/6/25 (Item 25 from file: 5) 04295773 BIOSIS NO.: 000078025316 CHRONIC PER CUTANEOUS PERI CARDIAL DRAINAGE WITH MODIFIED PIGTAIL CATHETERS IN CHILDREN 1984 (Item 26 from file: 155) 03498197 76156419 PMID: 1258506 [Transfemoral coronary angiography. II. Technical aspects of risk loweringl Feb 1976 (Item 1 from file: 73) 33/6/3 EMBASE No: 2001290207 MR-guided percutaneous drainage of abdominal fluid collections in combination with X-ray fluoroscopy: Initial clinical experience 2001 33/6/4 (Item 2 from file: 73) 11229579 EMBASE No: 2001244398

Internal jugular venous cannulation (multiple letters) [4] 2001 33/6/6 (Item 4 from file: 73) 07217571 EMBASE No: 1998110464 Prevention of the inadvertent aspiration of air into 6 French quiding catheters during magic wallstent implantation 1998 (Item 1 from file: 148) 20/6,K/1 DIALOG(R) File 148: (c) 2002 The Gale Group. All rts. reserv. SUPPLIER NUMBER: 19691627 (USE FORMAT 7 OR 9 FOR FULL TEXT) Interventional radiology. (Issues in Imaging, part 2) August 2, 1997 WORD COUNT: 3734 LINE COUNT: 00311 percutaneous approach determined by the imaging so that vital organs are not traversed by the drainage catheter. Catheters up to 30F may be inserted under local anaesthetic. Percutaneous nephrostomy is usually done by... ...disrupted by ESWL a catheter is inserted into the ureter from a cystoscope to prevent occlusion of the ureter by stone fragments. This catheter has a pigtail-shaped tip at each... ...report of erosion of a stiff catheter into the iliac vessels, which caused haematuria, but embolisation of the bleeding vessels was performed percutaneously. In patients with pelvic radiation and long-term... ...and the tubes should be changed regularly. This is usually done during cystoscopy over a guidewire introduced from below. Broken portions of ureteric catheters can be retrieved via a nephrostomy when... (Item 1 from file: 442) DIALOG(R) File 442: (c) 2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00028624 Evaluation of Silicone Elastomer Catheters for Long-term Intravenous Chemotherapy (ORIGINAL INVESTIGATIONS) LINE COUNT: 00188 WORD COUNT: 02608 ... The catheters that were accidentally dislodged or mechanically damaged were replaced using a J-shaped guide wire through the same venipuncture site. Four catheters had to be removed because of phlebitis; all... ... myelosuppressed at the time of the infectious episode. A total of seven catheters developed intraluminal occlusion with blood clot; however, only one of these had to be removed. Injection of urokinase into the Silastic catheter, as described previously, (Ref. 10) consistently reestablished the patency and avoided the removal... $\dots 0.5$ to 1 mL of urokinase (5,000 IU/mL) and five minutes later catheter . The only catheter that was removed because aspirating the occlusion was done outside our institution without a trial of urokinase. Subclavian thrombosis occurred as a complication in one patient, requiring the removal of the catheter. This patient... (Item 7 from file: 88) DIALOG(R) File 88:(c) 2002 The Gale Group. All rts. reserv. SUPPLIER NUMBER: 12199768 Open vs. closed peritoneal lavage in abdominal trauma. (Tips from Other Journals) May, 1992 WORD COUNT: 371 LINE COUNT: 00031 DESCRIPTORS: Peritoneal lavage--Technique; Hemorrhage--Diagnosis

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(Item 8 from file: 88)
 DIALOG(R) File 88:(c) 2002 The Gale Group. All rts. reserv.
              SUPPLIER NUMBER: 11630710
 Peritoneal lavage in obese trauma patients. (Tips from Other Journals)
 Nov, 1991
                      LINE COUNT: 00032
 WORD COUNT: 319
  DESCRIPTORS: Overweight persons--Surgery; Peritoneal lavage--Technique
  22/8/9
             (Item 9 from file: 16)
 DIALOG(R) File 16:(c) 2002 The Gale Group. All rts. reserv.
            Supplier Number: 41708362 (USE FORMAT 7 FOR FULLTEXT)
 Endoscopic Method Bypasses Urethral Strictures
 Dec, 1990
 Word Count:
               435
 PUBLISHER NAME: Advanstar Communications, Inc.
EVENT NAMES: *390 (Nonmanufacturing technology)
 GEOGRAPHIC NAMES: *1USA (United States)
 PRODUCT NAMES: *8000419
                           (Surgical Procedures NEC)
 INDUSTRY NAMES: BUSN (Any type of business); HLTH (Healthcare - Medical
   and Health)
 NAICS CODES: 62 (Health Care and Social Assistance)
             (Item 12 from file: 442)
 DIALOG(R) File 442: (c) 2002 Amer Med Assn -FARS/DARS apply. All rts. reserv.
 00046992
 Copyright (C) 1989 American Medical Association
 Percutaneous Cholecystostomy in the Diagnosis and Treatment of Acute
 Cholecystitis / ik the High-Risk Patient (PAPERS READ BEFORE THE 96TH ANNUAL
 MEETING OF THE WESTERN SURGICAL ASSOCIATION, SAN DIEGO, CALIF, NOV 14-16,
 1988)
   LINE COUNT: 00343
                             WORD COUNT: 04738
              (Item 13 from file: 444)
 DIALOG(R) File 444:(c) 2002 Mass. Med. Soc. All rts. reserv.
 00105708
 Copyright 1989 by the Massachusetts Medical Society
 Dissolution Of Cholesterol Gallbladder Stones By Methyl Tert-Butyl Ether
 Administered By Percutaneous Transhepatic Catheter (Original Article)
   1989;
  22/8/17
             (Item 17 from file: 457)
 DIALOG(R) File 457: (c) 2000 The Lancet, Ltd. All rts. reserv.
 00076226 (USE FORMAT 7 OR 9 FOR FULLTEXT)
 TITLE: Original Articles: Randomised trial of endoscopic versus
   percutaneous stent insertion in malignant obstructive jaundice
 1987 Jul 11
              4069
 WORD COUNT:
            (Item 18 from file: 442)
 DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv.
 00011795
 Copyright (C) 1986 American Medical Association
 Percutaneous Transhepatic Biliary Drainage; Results and Complications in
 81 Patients (ORIGINAL CONTRIBUTIONS )
   LINE COUNT: 00225
                            WORD COUNT: 03118
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22/8/19 (Ttem 19 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00027283

Copyright (C) 1984 American Medical Association

Fatal Hemothorax Caused by a Subclavian Hemodialysis Catheter; Thoughts on Prevention (CLINICAL OBSERVATION)

LINE COUNT: 00110

WORD COUNT: 01528

22/8/20 (Item 20 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00038744

Copyright (C) 1983 American Medical Association

Combined Fluoroendoscopic Removal of Retained Biliary Stones (PAPERS READ BEFORE THE ANNUAL MEETING OF THE SOUTHEN CALIFORNIA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS, RANCHO MIRAGE, CALIF, JAN 14-16, 1983)

LINE COUNT: 00138

WORD COUNT: 01916

22/8/21 (Item 21 from file: 442)

DIALOG(R) File 442: (c) 2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00038743

Copyright (C) 1983 American Medical Association

Percutaneous Transhepatic Drainage; Risks and Benefits (PAPERS READ BEFORE THE ANNUAL MEETING OF THE SOUTHEN CALIFORNIA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS, RANCHO MIRAGE, CALIF, JAN 14-16, 1983)

LINE COUNT: 00326

WORD COUNT: 04504

22/8/22 (Item 22 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00038915

Copyright (C) 1983 American Medical Association

Role of Surgical and Percutaneous Drainage in the Treatment of Abdominal Abscesses (PAPERS READ BEFORE THE SECOND ANNUAL MEETING OF THE SURGICAL INFECTION SOCIETY, BOSTON, APRIL 19-20, 1982--PART II)

LINE COUNT: 00387

WORD COUNT: 05350

22/8/23 (Item 23 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00027638 $\sqrt{\ \ \ \ }$

Copyright (C) 1983 American Medical Association

Pyogenic Liver Abscess (GRAND ROUNDS)

LINE COUNT: 00239

WORD COUNT: 03306

22/8/24 (Item 24 from file: 442)

DIALOG(R)File 442:(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv. 00002436

Copyright (C) 1982 American Medical Association

Percutaneous Radiographically Guided Catheter Drainage of Abdominal Abscesses (ORIGINAL CONTRIBUTIONS)

LINE COUNT: 00161

WORD COUNT: 02224

22/8/25 (Item 25 from file: 813)

DIALOG(R)File 813:(c) 1999 PR Newswire Association Inc. All rts. reserv. 0245358 DE003

NATIONAL-STANDARD INTENDS TO DIVEST ITS MEDICAL PRODUCTS GROUP

DATE: February 23, 1990

WORD COUNT: 190

COMPANY NAME: NATIONAL-STANDARD COMPANY; NATIONAL-STANDARD MEDICAL

PRODUCTS

TICKER SYMBOL: NSD (NYS)

PRODUCT:

MACHINERY (MAC); HEALTH CARE, HOSPITALS (HEA)

STATE:

MICHIGAN (MI)

SECTION HEADING: BUSINESS

, <

26/6/3 (Item 1 from file: 444)

00116098

Complications of Endoscopic Biliary Sphincterotomy (Original Articles)

20/TI/1 (Item 1 from file: 350)

DIALOG(R) File 350:(c) 2002 Derwent Info Ltd. All rts. reserv. Catheter assembly for use as interventional quiding catheters, comprises a tubular body having thermoresponsive distal tip portion fixed to distal end of catheter assembly

(Item 3 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv. Endoluminal aspiration catheter comprises guidewire and endovascular catheter insertable into lumen of aspiration

20/TI/7 (Item 7 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv. Catheter for isò Kating blood vessel segment has guiding catheter connected to inflation port to expand attached latex balloon as fluid is injected through port, and aspiration port coupled to major lumen to evacuate material

(Item 8 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv. Catheter exchange method allows for removal of standard guide and replacement with guide wire or catheter bearing an occlusive device e.g. during percutaneous transluminal angioplasty

(Item 11 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv. Device for augmenting flow in patients suffering from occlusive cerebro-vasular disease, comprises tubular members carried within the lumen of an elongate catheter

20/TI/12 (Item 12 from file: 350)

DIALOG(R) File 350:(c) 2002 Derwent Info Ltd. All rts. reserv. Atherectomy device that permits occlusive material to be removed from tortuous and, small diameter vessels, comprises a cutting region including slotted tubular members interconnected by flexible segments

20/TI/13 (Item 13 from file: 350)

DIALOG(R) File 350:(c) 2002 Derwent Info Ltd. All rts. reserv. Rendering object surfaces resistant to biopolymer adhesion

20/TI/15 (Item 15 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv. Production of bio-compatible medical device with immobilized biomolecule on substrate surface

20/TI/16 (Item 16 from file: 350)

DIALOG(R) File 350: (c) 2002 Derwent Info Ltd. All rts. reserv.

Biostatic composition comprising an antimicrobial agent bonded to a polymer, prevents bacterial adhesion to e.g. medical devices

20/TI/17 (Item 17 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.

Thrombectomy < catheter for percutaneous use in veins and arteries, possibly obviating lysis medication

20/TI/19 (Item 19 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Apparatus for removing blockages from arteries etc.

20/TI/20 (Item 20 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.

Vascular catheter system used in balloon angioplasty, laser ablation angioplasty, balloon embolectomy

20/TI/22 (Item 22 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Catheter for injecting medical solution during surgery in blood vessel - includes porous resin material that sucks medical solution to be injected into blood vessel when predefined portion of balloon is pressed

20/TI/26 (Item 26 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Percutaneous aspiration catheter system used to break up and extract blood clots from blood vessels - has barbs positioned near distal end to trap material within catheter, barbs being integrally formed with ring mounted within lumen

20/TI/28 (Item 28 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Distal atherectomy catheter for removing obstructions, plaque, stenosis, occlusions etc. from an artery or coronary vessel - has cutter head assembly attached to the distal end of the catheter tube, with rotary cutter mounted within the cutter head assembly and connected to flexible drive

20/TI/30 (Item 30 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Atherectomy cutter - comprises resilient blades between hubs at rotatable torque tube end for insertion in catheter, with blades compressed, and has funnel at tube end to collect debris under suction

20/TI/31 (Item 31 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.
Distal atherectomy catheter for removing obstructions, plaque, stenosis and occlusions from artery or coronary vessel - has reciprocal rotary cutter head at distal end of catheter rotated at low speed i.e 2000 rpm for progressively opening lumen of blood vessel and entrapping excised material into containment housing

20/TI/33 (Item 33 from file: 350)
DIALOG(R)File 350:(c) 2002 Derwent Info Ltd. All rts. reserv.

Catheter system for removal of vascular obstructions - has inner catheter body wall defining central lumen which fluidically couples distal and proximal ends of inner catheter

22/TI/2 (Item 2 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
EXPANDABLE ABLATION BURR

22/TI/3 (Item 3 from file: 349)
DIALOG(R)File 349: (c) 2002 WIPO/Univentio. All rts. reserv.
MEDICAL DEVICE/WITH BRAID AND COIL

22/TI/6 (Item 6 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
MECHANICAL PUMP FOR REMOVAL OF FRAGMENTED MATTER AND METHODS OF MANUFACTURE
AND USE

22/TI/9 (Item 9 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
METHOD AND APPARATUS FOR DIFFERENTIALLY PERFUSING A PATIENT DURING CARDIOPULMONARY BYPASS

22/TI/10 (Item 10 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
FILTER FLUSH SYSTEM AND METHODS OF USE

22/TI/11 (Item 11 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
METHODS AND LOW PROFILE APPARATUS FOR REDUCING EMBOLIZATION DURING TREATMENT OF CAROTID ARTERY DISEASE

22/TI/14 (Item 14 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
REMOTELY REMOVABLE COVERING AND SUPPORT

22/TI/15 (Item 15 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
DEVICE AND METHOD FOR RADIATION THERAPY

22/TI/17 (Item 17 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
NOVEL APPARATUS AND METHOD FOR ISOLATED PELVIC PERFUSION

22/TI/18 (Item 18 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
ELECTROSURGICAL SYSTEMS AND METHODS FOR RECANALIZATION OF OCCLUDED BODY LUMENS

22/TI/23 (Item 23 from file: 349) DIALOG(R)File $\beta\dot{4}\dot{9}$:(c) 2002 WIPO/Univentio. All rts. reserv. APPARATUS FOR REMOVAL OF MATERIAL FROM STENTS

22/TI/24 (Item 24 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
IMPROVED HYPODERMIC SYRINGE

22/TI/25 (Item 25 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
RADIATION TREATMENT OF THE VASCULAR SYSTEM

22/TI/28 (Item 28 from file: 349)
DIALOG(R) File 349:(c) 2002 WIPO/Univentio. All rts. reserv.

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PERCUTANEOUS TRANSSEPTAL LEFT ATRIAL CANNULATION SYSTEM

22/TI/29 (Item 29 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
CATHETER-NEEDLE ASSEMBLY AND METHOD FOR DRAINAGE OF FLUID COLLECTIONS

24/6/1 (Item 1 from file: 348)

00363142

Catheter Y-connector with guidewire locking means.

Total word count - documents A + B 3168

24/6/2 (Item 1 from file: 349)

00751433 **Image available**

METHOD AND KIT FOR TRANSVENOUSLY ACCESSING THE PERICARDIAL SPACE VIA THE RIGHT ATRIUM

Publication Year: 2000

24/6/3 (Item 2 from file: 349)

00510812 **Image available**

CATHETER SHAFT

Publication Year: 1999

24/6/4 (Item 3 from file: 349)

00458417

METHOD FOR TRANSVENOUSLY ACCESSING THE PERICARDIAL SPACE VIA THE RIGHT ATRIUM Publication Yearx 1998

24/6/5 (Item 4 from file: 349)

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SURGICAL ACCESS DEVICE HAVING VARIABLE POST-INSERTION CROSS-SECTIONAL GEOMETRY

Publication Year: 1993